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Part 1.—Original Communications.

ARTICLE I.

Practical Remarks upon the Treatment of Simple and Complex Forms of Intermittent Fevers. Read before the Ottawa Medico-Chirurgical Association. By A. H. HOWLAND, M.D., President of the Association.

I trust that, from a practice of twenty-five years exclusively in districts of country rife with all the protean forms of disease that emanate from what is termed "*Malaria*," my remarks may be of some value in a practical point of view, at least to the junior members of the profession. I have quite as little desire as ability to make a display of professional erudition by an attempt to present you with a learned discourse upon medical science, and have therefore supposed that to give you a synopsis of my experience in the treatment of the intermittent and remittent fevers and some of their varied complications, as they prevail in this state, would be far more acceptable if not more beneficial to you than anything else I could offer.

All the theoretical knowledge which the learned Professors in our Eastern Medical Institutions can impart to the student of medicine, will never qualify him to treat with success the

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endemic fevers of this climate, especially when they simulate and are complicated with other diseases; or to treat them in a manner that will satisfy the conscience of one who has a correct view of the value of human life, and the great responsibilities of medical men, unless these professors have had an *extensive practical experience themselves*, in such diseases. Nothing but clinical observation and experience will enable us to detect the true pathological condition of the system in the complicated forms of disease that appear in malarious districts; and if we fail in this, our prescriptions may be useful, or they may prove injurious, according to circumstances.

When I first came here, fourteen years ago last October, and for several years after, the malarious influence was so strong that no other disease was permitted even a temporary abode in our mortal frames. Thus it was in Western New York, when I first settled there in 1823. But as this influence gives way by the improvement of the country and the acclimation of the inhabitants, the thousand nameless ills that "flesh is heir to," begin to assert their prerogative to reign in the flesh, and if they cannot reign alone are content to share a divided empire.

Most of you, gentlemen, are yet young in the profession, and in common with all mankind, I have no doubt, feel full confidence in yourselves to treat all diseases scientifically, and with approved skill. At least so thought I when I commenced the practice; and in this opinion, perhaps, we do not greatly err. But the error lies in our inability, without experience, to tell what the disease really is that we are called to treat; or, in other words, to discover the true pathological condition of the system. Here is the great obstacle that lies in the way of successful practice. This removed, a well grounded theoretical knowledge, without a day's experience, is all that is essential to correct and appropriate treatment. Therefore, to be able to discern this condition of the system is of the most momentous consequence, not only to the patients

but also to the success and reputation of the physician. I cannot better illustrate the truth of this position than to say that I lost more patients in proportion to the number treated, other things being equal, during the first five years of my practice than I have during the last fifteen. And if you will keep a record of the cases you treat and their results, and continue the practice as long as I have, you will find it not only useful but confirmatory of my own experience. You will give less medicine and lose fewer patients under a more enlarged experience.

Happily for the human family, it is no longer deemed necessary, by the majority of our profession at least, to salivate, or to scrape the stomach and intestines with drastic purgatives and emetics, in order to cure the autumnal remittent and intermittent fevers. To this great change I attribute some portion of the decrease of deaths in my own practice. For many years, in the treatment of *all* diseases, I have avoided ptyalism by every precaution compatible with a judicious use of calomel. I seldom give emetics—never in the uncomplicated forms of these fevers in the sultry season, or even in September—especially mineral emetics. It may seem paradoxical to say that what is correct and successful practice in these fevers *one year*, may be improper and even fatal the next, yet such has been my experience. This is occasioned by strong local determinations to this or that important organ, to the presence or absence of epidemic influence and its character when present. As a familiar example, the epidemic influence of the black tongue, (or the epidemic erysipelas as it was called,) although but a few sporadic cases occurred here, rendered bleeding almost certainly fatal in the treatment of these fevers, unless it was promptly followed by powerful tonics and stimulants. If the fevers present determinations to the brain and serous membranes, depletion is far more admissible than when the determination is to the mucous tissues, or to the parenchymatous substance of any important organ. Some years emetics are borne with safety, while in

others they are positively fatal. My practice in the treatment of these fevers has been, for years, very plain and simple, and I know far more successful than formerly, when I used a much greater variety of medicines than I now do, and dealt most of them out with greater liberality. I believe that every case of these fevers, as they occur here in ordinary constitutions, when uncomplicated, is curable. Sedatives, mild purgatives and tonics, or, in other words, morphine, quinine, calomel, rhubarb, and sup. carb. of soda constitute not only my main reliances, but they are about all the articles I either purchase or carry with me from June to November. During the remainder of the year, I add to this list tartar emetic and ipecacuanha. Some years I find many cases that require bleeding, in others but a few. I never bleed during the decline of a paroxysm, unless it be attended with local inflammation. I am generally called on the approach of the second paroxysm of these fevers. The treatment I have found most successful is the following:

If the case requires bleeding to bring the system into a condition favorable for the influence of quinine, bleed, and prescribe calomel, 15 grs., morphine $\frac{1}{4}$ gr., to be mixed and taken at once, and cold water ad libitum. I leave at the same time calomel 5 grs., morphine $\frac{1}{4}$ gr. to be taken in from four to six hours. I also leave, on my first visit, quinine 20 grs., rhubarb 20 grs., mixed and divided into three portions. Into one of these I put morphine $\frac{1}{4}$ gr. and direct this one to be taken at that hour of the night or morning when it is probable the fever will be approaching or at its greatest remission or intermission as the case may be, following it with the other two portions at intervals of one or two hours, as the intermission is expected to be longer or shorter, but to be given though there be no remission. I make it a point to visit my patients next day between ten A. M. and two P. M. If the bowels have not moved, I order rhubarb and soda 10 grs. of each, to be mixed and taken in a spoonful or two of cold water, and repeat the same every two hours till it ope-

rates, accompanied with cold acidulated drinks if required by the patient. I then leave quinine, 15 grs. divided into three portions with $\frac{1}{4}$ gr. morphine in one of them, to be taken first in the latter part of the night or early part of the morning, and followed by the other two as before. In ordinary cases, this treatment, followed by 5 grs. quinine every morning for a few mornings, and keeping the bowels regular with rhubarb and soda, is all that is necessary to effect a cure. Blisters and the old fashioned fever powders made of camphor, ipecac., opium, and nitre, I have long since abandoned as positively injurious, for in many of the cases the stomach is in a congested or phlogosed state, rendering all irritating or stimulants highly improper. Yet, to my surprise, I frequently see them prescribed, and that by new fledged M. D.s fresh from distinguished medical schools. If the quinine be good nearly every case of plain, uncomplicated fever, as it occurs here, will yield to the above treatment in forty-eight hours. Of late, owing to the diminished power of the quinine, I have been obliged to nearly double the dose. A judicious use of these remedies by increasing or decreasing their quantities and varying their proportions, together with local bleeding to meet the varied circumstances of age, sex, and pathological condition in different individuals, and in different seasons, has proved, in my hands, for many years past, preeminently successful.

The complicated form of this disease which destroys the greatest number of lives in this state is that which prevailed here last spring and this winter—generally called winter fever, or lung fever, by the people and by many physicians. The seat of inflammatory action, during the incipient stages, is most frequently the bronchia, and if permitted to run its course, it finally involves the lungs and not unfrequently the liver—constituting a well marked case of pneumonia biliosa. This complex disease has destroyed more lives for three years past in this and adjoining states, so far as my observation extends, than all other causes of death com-

bined. This fatality has attended it, not, as I apprehend, because it is incurable, but because the depressing influence of the malarious poison, latent in the system, is overlooked or not recognized by the physicians, and not even suspected by those who have lately arrived from the eastern states where these fevers do not prevail. This latter class of physicians treat it as they would a case of pneumonia in New England, which only hurries the sufferers to the grave.

I will give you the results of my experience in the treatment of this disease. I have found it eminently successful, so much so that during the first six months of last year I lost but two patients within the limits of this corporation, who came under my care before they had been prescribed for by others. If the patient be a stranger to me, my first inquiry is—where have you lived during one or two years last past? If his reply satisfies me that he has not been exposed to the malarious influence during the two previous years, I treat the case as I would one presenting the same or a similar train of symptoms in New England. If, on the contrary, he has been exposed to such an influence, still, as a general rule, I bleed either generally or locally, or both. But whether I bleed or not emetics, calomel, and quinine are my sheet anchor of hope. If the attack be recent, it will be easy to detect a periodicity in the disease, marking the footsteps of the insidious foe, "malaria;" but if it has been running its course for three, four, or five days, then the inflammatory action is by far the most, if not the only ostensible feature of the disease rendering the febrile movement continuous. Be this as it may, as a general rule, if the patient has resided in a district of country during any considerable portion of the last twelve months, where these fevers are known to prevail, I adopt the same course of treatment that I would if I knew him to be laboring under the depressing influence of malaria. I bleed as above stated, and prescribe an emetic of tartrate of antimony in sufficient quantity to operate when combined with one-eighth grain of morphine. When so combined, I

know from experience in my own person, that it is much less distressing and irritating to the stomach, especially if mucilages are given during its operation. If business permits, I make a point to remain and see that the liver is acted on and healthy bile thrown up. After which I prescribe from five to fifteen grains of calomel, with one-fourth grain morphine and one-fourth grain tartar emetic, or five grains ipecac., to be taken about three or four hours after the operation of the emetic; and I repeat this powder with a diminished quantity of morphine every three or four hours, according to the violence of the inflammatory action, till from two to four powders are taken. I endeavor so to time it that the foregoing prescriptions are gone through with by two o'clock A. M. I also leave three powders containing each five grains quinine, one-eighth grain morphine, one-eighth grain tartar emetic, and five grains rhubarb, directing them to be taken at four six, and eight o'clock, A. M. I leave also directions that if these medicines do not move the bowels freely by ten or eleven o'clock, A. M., to have them moved by injections or castor oil, or rhubarb and soda. I endeavor to return at about two P. M., next day, and then repeat the bleeding, general or local, or both, or neither, according to the violence of the inflammation, and if the disease does not appear to be yielding rapidly, I repeat the emetic but not the tartar emetic alone, but combined with ipecac. or eupatorium. And if the liver appears to be involved in the inflammatory action, I repeat the calomel in diminished doses, and follow it again with quinine combined as before. and during the same portion of the twenty-four hours—moving off the bowels next day with oil or rhubarb and soda if necessary. To deplete and give tonics on the same day may appear strange to some of you, yet experience has taught me that such treatment is not only compatible with my views of the pathology of this disease, but also that it is eminently successful. The quinine would not be borne without increasing the inflammatory action, if unaided by depletion; and depletion unaided by the quinine

to destroy the depressing influence of the malaria, would only hasten the patient to that "bourne whence no traveler returns." A repetition of local bleeding and of the quinine is frequently necessary for several days and in many cases of the emetic also; but if judiciously applied the disease is sure to yield.

In all the post mortem examinations I have witnessed in this disease, death has been the consequence of inflammatory action, yet it stole on insidiously, unattended with much pain or uneasiness until irreparable mischief was done—hence we see the importance of being upon our guard, and of treating its incipient stages with prompt and efficient remedies, and holding no truce nor parley with the skulking foe, until the natural and healthy secretions of the system are fully established.

In this disease I sometimes blister, *but never while general depletion is necessary*, nor hardly ever in children.

I have seen more masked, anomalous, and complex cases of intermittent and remittent fevers during the last eighteen months than I have in five years before—since 1841-2. There is hardly a disease that prevails in the United States, whose mantle the foul fiend has not assumed. The whole catalogue of nervous diseases and all the inflammatory affections have been imitated with a fidelity and a semblance of truth so strong, as in some instances to baffle the scrutiny of the most experienced in the profession. As an instance in point, allow me to relate a case. A year ago last December I was called in the night to see the Hon. Mr. M——, who was said to be dying at the Fox River House. On my arrival I found him bolstered up in bed laboring under what he called, and what his physician in Joliet called, and what in fact appeared to be, a violent fit of asthma; so violent indeed that suffocation seemed inevitable, and probably would have taken place in a recumbent position. The coughing was incessant, and the quantity of mucous slightly tinged with blood that he threw up was enormous. I learned from his

wife—for it was with the greatest difficulty that the patient could speak at all—the attacks had occurred irregularly at intervals varying from one to three or four weeks, for three or four months past; that his physicians had told him it was asthma, and treated it accordingly; and that he had, that morning, left Joliet for St. Louis, in usual health, but with an ample stock of his medicine for the asthma in case of an attack. I pronounced it a masked intermittent and proposed bleeding. To this he objected, saying he knew it to be asthma. I soon reasoned him into compliance, and drew from his arm twenty ounces of blood and administered an emetic. The bleeding produced immediate but only partial relief—the emetic was combined with morphine, and, as soon as it operated, gave him entire ease. I then gave eight grains quinine combined with morphine and rhubarb, and followed it with five grains more in two hours. I also furnished him with fifty grains quinine, made into powders of five grains each, with morphine and rhubarb, three of which I directed him to take during the day, and after that one every morning until all were taken. In the morning, at ten o'clock, sixteen hours from the commencement of the attack, I sent him on his way to St. Louis with instructions to have his asthma treated as an ague, since which he is no longer troubled; finding a prompt remedy in quinine and emetics, without the aid of his asthmatic physician.

I scarcely meet a case of disease in any one who has resided in the Western States during one summer, that does not require quinine. But to give it uncombined with morphine, ipecac., tartar emetic, or purgatives, one or all, as the case may seem to require, or without bleeding, would destroy instead of cure in all cases attended with any considerable amount of inflammatory action. But judiciously administered in conjunction with these, it is all powerful to cure. I ask for no more potent remedy except in a few cases simulating the nervous affections, as tic doloureux or sciatica. In a few of these I have found it to fail, and have had recourse to arsenic

which has succeeded after quinine, in conjunction with the most approved preparations of iron, had entirely failed. When giving quinine in large and repeated doses in some bad cases during the last spring and winter without the desired result, I have sometimes paused in doubt as to the propriety of the treatment I was pursuing, yet, on a careful revision of the case, I have invariably had to return to its use ; but sometimes not till after prescribing another emetic or bleeding, and then have found it successful. It is now so adulterated and so much of it is made from other barks that no certain reliance can be placed on a given number of grains. It must be given *till the desired effect is produced*. Strychnine I have never used, and regret that it has been introduced as a remedy, believing, as I do, that more damage than good will be the result. I know of six deaths within the last two months from its use, and have no doubt that hundreds will fall a sacrifice to its influence, for it is scarcely a safe remedy in the hands of the most skilful to say nothing of the unskilful, the charlatans, and some of the common people, who are already beginning to use it. They doubtless think that they can prescribe it as well as quinine or morphine—as one poor man did a few weeks since at Homer, in this county, who gave it to five of his children, four of whom died in horrible agony in thirty minutes.

With these remarks I close, not, however, without expressing the hope, that you, gentlemen, will feel sufficiently interested in the progress of medical science, and the importance of associating for our mutual benefit, to sustain this society, to hold regular meetings, and to appoint delegates to the national convention. Our numbers will fast increase with the growth and prosperity of the town and country, and much may be done, by proper association to maintain the dignity of the profession, command the respect of the community, suppress quackery, and advance our mutual interests.

ARTICLE II.

Ovarian Dropsy. By THOMPSON MEAD, M. D., of Batavia Ill.

March 11th 1848.—Was called to Mrs. M. N., aged 33. She complained of an uneasy dragging sensation, occasionally pain in the left iliac region, and a feeling of weight and numbness in the corresponding hip; appetite variable, sometimes good and then poor; more or less nausea, with pain or distress in the stomach and coldness of the feet. The symptom she complained of as being the most constant, was the sensation of a fluid constantly falling, drop by drop, into the abdomen, which had increased with the accession of the other symptoms. Urine somewhat more scanty than in health, rather pale; bowels generally costive; the os uteri was situated higher than is usual. It was about a year since she first began to complain. By an external examination, I found the left side of the abdomen more prominent than the other, and deeply situated about midway between the ant. sup. spine of the ilium and the navel, a tumor as near as I could judge of the size of a foetal head at six months. It was of considerable firmness, and somewhat firmly fixed in its situation, with no distinct evidence of any fluctuation. Of late, I was informed, it had increased in size quite fast. She could only lay on the left side. I was also informed that in the morning it was softer. As night approached the pain, sense of dragging, &c. increased.

Prescribed, in pill, blue mass, ext. hyosciam., and comp. ext. colocynth; iodine in solution of hyd. potash; a diuretic drink, and externally over the tumor, ung. iod. plumbi 3j to 5j lard.

Gradually her appetite improved, bowels became more regular, with less uneasiness about the tumor.

In June, after having felt remarkably well, she was attacked with pain in the region of the tumor, which was very se-

vere, and from thence it extended over the whole abdomen with alternate chills and fever.

I saw her some three hours after this attack, which was sudden, and could discover no appreciable alteration of the tumor. Some 12 hours after I left, profuse diuresis came on. The next day I could not feel the least vestige of the tumor. I was then informed that as the diuresis continued the tumor diminished in size till it could not be felt, the tenderness of the abdomen gradually subsided. With the disappearance of the tumor a sensation of the fluid falling into the abdomen drop by drop also subsided. For a few weeks she continued to improve till she felt herself well, and resumed her labors about the house. The urinary discharge was described to me as being of a light color and without the ordinary smell of urine.

In the early part of Aug. there was a recurrence of the same symptoms, in the same order throughout the second attack.

Sept. 3d.—In the morning she was attacked with pain again in the tumor, and at night a profuse urinary discharge of the same character as that in the first attack, took place and with it a subsidence of the tumor and all the previous symptoms. She now, Nov., considers herself *well* and attends to her duties about the house.

ARTICLE III.

Electricity. A paper read before the Union Medical Society of Northern Indiana. By Dr. A. C. JACKSON.

From experiments made on animals by Dr. Wilson Phillip in 1822, it was pretty satisfactorily determined that the nervous system constitutes a perfect set of conductors, through which Electricity is conveyed to every part of the

body; and that this principle is necessary to give a healthy action to all the secretions and excretions of the system.

In these experiments, often repeated "the eighth pair of nerves, which are chiefly distributed to the stomach and lungs, were divided in the neck of several rabbits shortly after having fed upon parsley. Their respiration was thus immediately rendered laborious; nausea and frequent attempts to vomit supervened; and the animal finally died, apparently of suffocation. Upon opening their stomachs, also, the parsley was found quite unaltered, from which he concluded that the secretions of gastric juice, had been suspended. The same experiment was then performed upon other rabbits, with this difference, that galvanic currents were sent to the stomach by applying one of the poles of a small pile to the lower ends of the divided nerves, and the other to the epigasrium. In all these cases dyspnœa and a tendency to vomit were wanting, and the animals being killed after the current had been continued for 26 hours, the parsley was found perfectly digested, and the stomach exhaled the odor peculiar to this organ during digestion."

From experiments such as these, very frequently repeated, and always with the same results, Dr. Phillip concludes "that the secretion of gastric juice is under the control of the nervous influence, and that this latter is identical with, because it may be replaced by galvanism." And further he says "galvanism is capable of performing all the functions of the nervous influence in the animal economy."

Electricity has been recommended and used as an agent in the cure of some diseases for nearly a hundred years, but why has it not been more generally introduced? From this theory, advocated for the last twenty five years, and from empirical knowledge of its delightful effects in the cure of a great variety of disease, why does not electricity, galvanism, or the more modern electro magnetism, stand out as one of the most important remedial agents of which physicians are possessed, and with which the world is blessed? Surely

if its importance was appreciated, instead of seeing the machine or battery in the laboratory of the chemist alone, we would find it in the office of every physician. and at the bedside of every patient.

This agent would appear to be of more importance to us, as physicians, in this climate than in almost any other. A great majority of the cases we are called to treat, are more of a debilitated nervous, than an inflammatory character. There is something in the nature of the climate that tends to depress the power and energy of the system. In our treatment of disease, generally, we resort more to the use of tonics and stimulants than to depletory means. All the uncomplicated periodical diseases we see, are known to be of this character. Whatever theory is adopted with regard to the cause of intermittents or remittents, all agree that the impression is upon the nervous system. Our lingering agues, a thousand and one, our slowly convalescents from a more severe attack of fever; the sallow, bilious complexioned, we see ever day, with a torpid condition of all the secretions, all demand a supporting course. And in connection with our quinine, strychnine, &c., we might do well to use electricity to invigorate the system, and to restore the secretions,

In almost all cases of indigestion there is only a want of nervous influence. Such patients have diverted a due supply of nervous energy from the stomach, by intense mental application, or the stomach has become weakened from sympathy with a deranged system generally. In either case, from the experiments of Dr. Philip, the use of magnetism would be indicated, and its effects, in connection with the hygienic course generally recommended, would surely be the most delightful. For in all such cases, where the nervous system is not supplied with stimulus enough to feed all parts and functions of the body, it would most surely be good practice to substitute a principle of the same power, or, rather, directly add a supply of the same principle.

In some cases of amenorrhoea we have almost the same

state of things; an atonic condition of the system generally, with a want of uterine action. In our attempts to restore, we try to give tone and vigor to the system, and determine action to the pelvic viscera. Perhaps with no one means could we do half so much to meet the indications, in such a case, as with electricity.

Paralysis, amaurosis, deafness, &c., are affections in which above all, galvanism most naturally suggests itself. In these it has a long time been used, and has gloriously signalized its worth in giving sight to the blind, and hearing to the deaf; in bidding the dumb to speak, and the palsied body to arise and walk. In the cure of these we make a direct application to the principle, unless there be structural derangement of the nerves, the conductors are there but the flow of electricity they are wont to convey, is not regularly supplied, consequently there is imperfect sensation and motion, imperfect sight, and imperfect hearing. It is an interesting fact, and one that goes strongly to support this theory, that in all these instances electricity supplies the place of nervous influence. In paralytic parts, in which sensation and motion are gone, galvanism is known to excite instantaneous action. When a current of electricity is thrown upon the retina of amaurotic patients, light is seen, though there was darkness before, and objects are said to be discerned clearly, where there was imperfect vision.

Galvanism is said to have magic power in asphyxia, in violent concussion of the brain, and in deadened sensibility of the nerves from narcotic poisons. These are cases liable to occur any day in the practice of any physician. And though he be called to only one in a long life of practice, it is no less his duty and interest to be supplied with the most effectual means to meet the emergency of the case. Here, as in other instances in practice, the life of the unfortunate patient, as well as the hopes of the friends, depends upon the efficiency of the means of him to whom they have confided the case. And should he be successful in

the use of this agent in arousing and reanimating the almost lifeless body, as by magic, it would be well enough for the patient, delight enough for the friends, and glory enough for the physician.

But it is useless for me to specify cases in which this agent would be indicated, and in which it is recommended, as these are more familiar to you all. It is not only applicable in diseases of debility, but also when there is an irritable condition of the nervous system. It may have an exciting or sedative effect, according as it is applied. Dr. Dunglison says, "if a prepared frog be subjected to a quick succession of electric shocks, its muscles are rendered permanently rigid, and it exhibits all over the appearance of a tetanic patient; but now, passing through it for same time, a continuous current in the opposite direction, the muscles gradually relax and finally attain their natural state." And further, he says, "if this action be continued for sometime, the muscles become insensible, and the excitability, in a great measure, is destroyed; for, on subsequently applying shocks, no spasms, or very feeble ones, will be produced." Now this gives us a general direction for the application of electricity or electro magnetism. If we wish to arouse the system, or any function, we place the positive pole near the origin, and pass a succession of shocks in the direction of the ramification of the nerves of the parts we wish to excite. On the contrary, where a sedative effect is wanted, we use the continued current and pass it in the opposite direction.

We have used electro magnetism in a variety of cases the past summer; and, in no instance, without a beneficial effect. It is a powerful agent, and surely, from its interest and importance, should demand more attention from the profession.

ARTICLE IV.

A Case of Puerperal Convulsions. By BRADLEY NOYES M.D.
of Beaver Dam, Wisconsin.

Mrs L., aged twenty eight years, a large, plethoric, robust woman, pregnant with her first child, was suddenly attacked on the 19th of March, 1849, at 2 o'clock A. M., with puerperal convulsions. There were no premonitory symptoms, except slight nausea and vomiting. I arrived there about four hours after the attack, and was informed by her attendants that she had had two fits. At that time she was extremely sick at the stomach, and vomited large quantities of glairy bilious matter. She informed me that she thought herself only in the eighth month of her pregnancy; and there had been no labour pains. On examination found the os uteri had not commenced dilating. I gave her a small dose of solution of morphine, repeating it often until the irritability of the stomach and vomiting were checked. She was quiet and composed, except slight nausea and vomiting occasionally, for about six hours, when she was suddenly siezed with a violent convulsive fit. I immediately began to make preparations to bleed her. but in consequence of her peculiar local situation, (she was living in a very small, dark, board shantee,) and for the want of a suitable assistant, she had two more fits in almost immediate succession, before the operation could possibly be performed. I abstracted not less than a quart of blood from a large orifice in the arm, and gave her two common sized pills composed of pill. hyd. c. magnes. calc. On examination again per vaginum, found the os uteri had commenced dilating, and was satisfied that parturition had commenced. She was at this time, (2 o'clock P. M.) and had been since the third fit, nearly insensible, with stertorous breathing, except occasionally being restless and uneasy, which I have no doubt was owing to the contractions of the uterus, as is usually the case in the first stage of parturition.

The bleeding seemed to check the recurrence of the fits for a while, but within an hour they recurred again, and continued as often as every half hour, alternating with uterine contractions, and a most wild and furious look of countenance, and a violent tossing and throwing herself about, till about midnight when the head of the foetus had passed down in the pelvis. Her fits had become very severe and alarming, the convulsions were strong and very frequently repeated, her tongue lacerated by the teeth, blood flowing from the mouth, and she writhed, and turned and twisted herself in every possible manner. I became convinced that the only way to save her life was to remove the child dead or alive. An attempt was made to apply the forceps, but she turned and tossed herself about so, that at the first attempt, it was impossible to introduce them. At length, by the assistance of three persons, I succeeded in applying them, and soon delivered her of a living, healthy, female child about middle size. The placenta was readily removed. The insensibility still continued, with occasional spasms, when in about three fourths of an hour, the fits recurred again, and continued at short intervals for four or five hours, when on the repetition of the cathartic with two or three doses of ol. ricini, enemata and solution of morphia, they gradually subsided, and, after lying comatose a few hours, she suddenly started up in bed and attempted to step off on the floor, but she was arrested by her husband. Said she wanted to get the comb to comb her hair, which was handed her, and she immediately commenced combing. She was asked whether she knew any thing that had been going on, or when her child had been taken away from her, and she answered decidedly in the negative. On the second day the mother and child were getting along well.

marked distention of the abdomen. She was in this state (I think) for about an hour, and had been since the child fit nearly insensible, with nervous excitement except occasionally being restless and uneasy, which I have no doubt was owing to the contractions of the uterus as is usually the case in the first stage of parturition.

ARTICLE V.

Retention of Urine from Stricture of the Urethra; Puncture of the Bladder above the Pubis; "Extroductor" of the Bougie; Recovery. By DANIEL BRAINARD, M. D., Professor of Surgery in Rush Medical College, Chicago.

On the 6th of December, 1848 I was called to visit William Hickman, a stout, athletic, colored man, aged about 35 years, laboring under retention of urine from stricture. Eleven years previously he had gonorrhœa and stricture, which latter was neglected, although the surgeon in attendance gave full warning of the effects likely to result. From that time to the present he has been afflicted with the symptoms of stricture, which during the past year, have been severe, and for several weeks the retention has gradually become more perfect.

At present (Dec. 6th,) the bladder rises several inches above the pubis; there is great pain, and constant desire with inability to void the urine, except a few drops at a time. The urethra is hard, knotted, and irregular throughout its whole anterior part; the cellular tissues are much swollen, with a copious discharge of pus from the orifice. Abscesses had been, from time to time, formed along its course, and it was from one of these the pus came.

On attempting to introduce the catheter, it was found impossible to convey it more than three inches along the urethra before it entered a purulent cavity, behind which the canal could not be found.

Finding there was no prospect of relieving him in this way I ordered a saline purge, bled him to approaching syncope, and applied fomentations.

7th.—No relief. The bladder more distended, and some constitutional disturbance. Attempts to pass bougie repeated without success.

8th.—Symptoms urgent. The fundus of the bladder rises

nearly to the umbilicus, and the urine is discharged guttatim. I now determined to puncture the bladder, above the pubis, with the long curved trochar. This was done with the aid of Prof. Evans and a number of pupils, although it was necessary to place the patient under the influence of chloroform which was done perfectly. The trochar was then introduced about an inch above the pubis, and the canula, being carried to the bas fond of the bladder, the stylet, was withdrawn. After a copious discharge of urine, the orifice of the canula was closed with a small cork, which could be withdrawn for discharging the urine.

The unpleasant symptoms having, in this case, subsided in the course of twenty-four hours, the patient was extremely well satisfied with this new method of voiding urine, and would willingly have dispensed with further treatment. Injections were thrown into the urethra, and no further treatment used until the irritation of that canal had subsided. As soon as the state of the parts would permit, attempts were made to find the passage, and as often as the smallest sized bougie could be carried into any unexplored portion, it was dilated by using those of larger size from day to day.

The efforts to find the natural passage were continued by the use of every kind of bougie that promised success, for eight weeks; wax, gum elastic, catgut, and flexible bougies were repeatedly tried, and injections of water used without success. Near the posterior extremity of the spongy portion of the urethra was a knotty projection, beyond which the instrument would not pass.

Being upon the point of abandoning the case as incurable, the thought occurred that the prostatic and membranous portions of the urethra could be explored by means of an instrument carried into the bladder through the opening made by the puncture and still occupied by the canula. This being withdrawn, a small sized elastic bougie rendered firm by a good sized wire and bent to form a segment of a circle about a foot in diameter was passed into the bladder, and its point

directed forwards. It was found very readily to enter the urethra, and passed with little difficulty, the obstacle which seemed insurmountable in front. By a little exertion, the point of the bougie was brought to within about two inches of the orifice of the urethra, and then seized with a pair of forceps, the wire was withdrawn, and the point of the bougie drawn out, the open end passing into and remaining in the bladder.

It was introduced in this manner Feb. 19th, 1849, and allowed to remain three days, when it was withdrawn and replaced by one of larger size, which passed without difficulty. Larger instruments were gradually used, till one above the medium size entered easily.

March 4th.—As much urine passes by the urethra as by the canula, and this was therefore withdrawn; after which the opening was closed, and urine passes more freely by the natural canal than has been done for a long time previously to the first operation.

He is now, March 31, 1849, pursuing his ordinary occupation, (shingle making,) and experiences little difficulty in voiding his urine. It is not to be expected, however, that any treatment could entirely restore the urethra to a healthy state, but by an occasional use of instruments, it is probable that the recurrence of so perfect a stricture may be prevented.

Several practical deductions may be made from this case. 1st. The puncture of the bladder above the pubis, if care be taken to prevent infiltration of urine, is a slight operation, and should not be deferred till extreme distention takes place. In further proof of this, we would refer to a case published not long since in the Buffalo Medical Journal, by our friend Dr. J. P. White, of that city. In that case a puncture of the kind served as a substitute for a urethra for a long time with but trifling inconvenience.

2d. This puncture may be made useful in catheterism. For this operation of passing a catheter forwards, which so far as we are aware, has not been done before. a friend has

suggested the name of *Extroductio*. It may be performed with a properly curved instrument very readily, and if difficulties should occur, they may be obviated by passing the finger into the rectum. If the cases in which it is likely to be useful are rare, they are extremely urgent, and when they occur this operation, may prove a valuable means of relief.

ARTICLE VI.

Remarks on Congestive Fever. By C. A. HATHWELL, M. D.,
of Virginia, Cass county, Illinois.

Congestive Fever is one of the most formidable diseases that medical men have to encounter, and imperatively demands the soundest judgment, watchfulness, promptness, and energy on the part of the attending physician. It is not my intention to furnish a treatise on this disease, but to state in as concise a manner as possible, the result of treatment in some cases that came under my care.

I shall confine myself to such articles as I have found most serviceable.

According to circumstances I have generally commenced with an active cathartic. Purgatives clear the alimentary canal of all morbid accumulations and relieve congestion. To obtain their full effect, I administer them daily. I usually employ calomel and jalap, with a small portion of tartrized antimony, worked off with oil or the neutral salts.

The bowels are generally loaded. The patient has strong sensations of internal heat, and there is also considerable gastric distress. These circumstances seem to imperately to call for such evacuations, and every practitioner knows how much relief and comfort is afforded by them. No one

conversant with the *modus operandi* of purges will fear their producing debility. At this period they not only relieve the stomach, but also congestion of the liver, head, and other important organs, upon the principle of revulsion. Nothing is better established than that, when the alimentary canal is oppressed with accumulations of feculent matter, the evacuation of this matter relieves the irritation of the system and adds new vigor to the body. As one of the auxiliaries, I place great confidence in cold applications; sponging the surface is a favorite remedy. I employ water, vinegar and water, brandy, &c. I do not believe they act by merely lessening the heat of the body, that they operate to a certain extent in this way I think certain, but they are more beneficial from the positive healthy action they impart to the system. As soon as practicable, I place my patient under the influence of large and repeated doses of quinine—it is, in fact, the only remedy we can rely on with confidence. But in certain cases during the cold stage, when I have found all the external applications, together with the most powerful and diffusible stimulants used internally, fail to bring about a reaction, I have found the use of ice to produce the most salutary effects. When I have met my patient in a state of great jactitation, complaining of intense internal heat, insatiable thirst, oppression in respiration, cold surface, pulseless, and with all the symptoms characteristic of this disease, I have found ice all powerful in producing reaction and restoring an equilibrium. My plan has been to break the ice into small pieces and set it by the bed side of my patient, force him to swallow it as fast as possible until the stomach is literally filled with solid pieces of it. The revulsive influence of ice has, in several instances, perfectly surprised me; but when we reflect upon the pathology of this disease, the congestion of the stomach and the great central accumulation and engorgement of the heart, liver, and large veins, the *modus operandi* may be easily made out. As soon as reaction is established, I look upon the case as completely under the

control and management of quinine. In protracted cases of collapse, when the blood has become vitiated for the want of oxygenation, perhaps there is but little reliance to be placed in any remedy.

ARTICLE VII.

A Case of Medullary Exostosis. By E. C. BANKS, M. D. of
Lawrenceville, Illinois.

Henry Thorn, a house carpenter, aged about 35 years applied to me on the 12th of October last, on account of a large tumor that occupied the entire calf of his right leg was very painful, and had continued to enlarge very fast, for some time. Although this tumor had been nine years and better in attaining its present size, he never suffered a particle of pain in it, since he discovered it, until about three months before I was summoned to attend him. I learned that about that time he fell and forced his leg in a flexed direction and hurt himself very much, and from this time he dates the commencement of his sufferings. Then, again, a few weeks afterwards, he struck his leg just between the tibia and fibula anteriorly, against a trussle bench and hurt it very much in that part, and from that a severe pain was felt and some enlargement took place at the precise spot where the injury was received. This enlargement has continued until it was, when I saw it, about the size of a hen's egg. His sufferings became so intense, that he could no longer work at his trade, and applied to me for relief. I prescribed a few moderate bleedings, blisters to the part, and followed these with hydriodate of potash internally, and tincture iodine, externally, with light bandaging to the part. I gave the hyd. potash, to try to correct the scrofulous habit of body that I believed to

exist. I found that many of his relations had died of scrofulous disease in some form, and not a few with tubercular phthisis. Some relief was obtained for a few weeks, but then again his pains were as severe in the tumor and leg as over; while his general health gave way. I advised amputation of the limb as the only means of cure, and even that under present circumstances, seemed doubtful. He and his friends readily agreed that the operation should be performed, and I set about preparing him for it. Amputation above the knee joint was the only chance, as the tumor grew from the superior posterior faces of the tibia and fibula.

Under the influence of chloroform, which completely prevented pain during the greater part of the time, the operation was performed on the 24th of November last.

I bled him next morning, as I had not allowed much hemorrhage to take place in the operation, and as high excitement seemed fast coming up. Since then, now near a month, he has been doing quite well. But a small part of the stump healed by the first intention.

Character of the tumor.—I have ventured to call what most writers would term osteo-sarcoma, by the name at the head of this article, as the tumor is more like brain than flesh.

I dissected off the muscles, and sawed through a bony shell, encasing a soft, brain-like substance, intermixed with spicula of bony matter, much softer and brittler than healthy bone. A soft, spongy, fragile, bony shell, surrounded the whole mass, except at its lower part, where it was soft, and when cut into, grumous blood flowed freely out, while the walls of the cavity containing it, resembled the membranes of the brain, though much thicker. The parts looked very like brain, intermixed with blood, and somewhat broken down. The bony shell surrounding the upper portion, and indeed nearly all the tumor was about as thick as ones hand, and resembled in shape a child's head with the occiput upward. It was also about the size of a young child's head, would weigh between four and six pounds, and was divided

into several parts, by something resembling sutures, though only united by a strong membranous substance. There were four distinct pieces of bone united in that way forming the case to the tumor.

A part of the tumor came through between the tibia and fibula, growing, as it proved, from the anterior portion, crowding those bones apart considerably. The base of this was of the same bony substance, but the more superficial part contained bloody pus, and was soft to the touch. This he thinks was occasioned by the stroke against the corner of the truss before spoken of. It was the most simple of any part. In the interstices of the different layers of bone, in this tumor, was a solid, matter, about the color and consistence of cheese.

ARTICLE VIII.

Popliteal Aneurism. Rupture of the Sac. Ligature of the Femoral Artery. Recovery. By DANIEL BRAINARD, M.D.
Professor of Surgery in Rush Medical College.

Catharine Driscoll, æt. 24 years, was seized about February 1st, 1849, during the night, with a severe hemorrhage, which was near proving fatal. She was seen by Dr. Chas. Duck, who used a temporary dressing, and she was then carried to the Chicago private hospital, and came under my care.

The patient was of very limited intellect, and apparently of irregular life, and could give no other account of the disease except that she had been kicked by a cow behind the right knee when she was very young. On examination, the right femur was found to be affected with an ancient necrosis

at its lower part, it being enlarged and irregular. There were numerous depressed cavities and three fistulous openings on the surface of the member. In the popliteal space was a fluctuating elastic tumor, about $2\frac{1}{2}$ inches in diameter, pulsating, and giving the rasp sound. These latter signs were suspended when the femoral artery was compressed. The knee was ankylosed in the straight position, and the leg considerably tumefied. It was through one of the fistulous openings that the blood flowed.

It was obviously a case of aneurism which had burst from coming in contact, most likely with the sequestrum. As the hemorrhage had been suppressed by the aid of compression I concluded to continue it, which was done by means of a roller applied from the toes upward with compresses over the openings. This dressing was carefully renewed and re-applied from day to day, the patient was very comfortable, and no bleeding took place till the 25th, in the night of which she lost several ounces of blood, which was arrested by additional compression. On the afternoon of the 26th, the hemorrhage again recurred and the patient was reduced very low.

It was then determined to tie the femoral artery, the patient not being in a state to support compression upon it sufficient to interrupt the circulation for want of sufficient intelligence. Indeed it is doubtful whether the case was a suitable one to be treated by that method.

By the aid of Professor Evans and several medical students, I placed a ligature around the artery on the evening of the 26th, which was done at the middle of the thigh without difficulty.

At 6 o'clock, P. M. one hour after the operation she complained of "numbness and fainting," foot and leg colder than the other, knee and thigh warmer, as had been the case for sometime before the operation.

27th.—Patient very comfortable, heat of leg restored, foot still cold. 29th.—Limb a little warmer than the other with slight febrile reaction.

She continued to do well until March 5th, when a slight hemorrhage took place from one of the fistulous openings for which a roller and compress were applied.

This did not recur, and the patient set up, sewed, and even moved about notwithstanding directions to the contrary. March 16th.—Ligature came away and the wound was nearly healed. March 25th.—She was sufficiently recovered to remove from the hospital and is pursuing, at the present time, her usual mode of life.

ARTICLE IX.

Modifying Influence of Malaria upon diseases of the South and West. By WESTEL W. SEDGWICK M. D., of Little Rock Illinois.

Probably there are not many, if any, of the profession who have resided for any length of time in the valley of the Mississippi, who have not noticed the modifying influence which malarial poison has over most if not all of the diseases of the country, and yet, most medical men of this region though they may have noticed its influence to a certain degree, do not, as I believe, consider how much it should have to do in modifying the treatment. The reason for this is obvious. Our authors have either not understood this point themselves or, they have failed to give it that attention which its importance demands.

We require and should have a work to which we can refer for information upon this point, based upon western practice and experience. Eberle's Practice, which has perhaps had as good a reputation as any other work is entirely deficient in this particular. The same may be said, to a certain extent, of Watson's Practice and others.

The consequence is that physicians, especially such as have been educated in the East without the advantages of the teachings afforded by western schools on the diseases of our climate, must depend wholly upon their own judgement in each particular case, until by experience the true plan of treatment is learned and adopted. It must be admitted that this is a difficult task for them, when we consider the vast difference between the diseases of this climate, as compared with those of the Eastern states, the one requiring depleting, the other supporting treatment as a general rule.

My observation has led me to the conclusion that there is scarcely a disease in this climate that does not require sooner or later, a tonic or supporting course of treatment, whether it be in winter, spring, summer, or autumn. Some physicians believe that it is only the diseases of summer and fall that require such a course of treatment; whilst in those of winter and spring, depletion should be resorted to. Will the success of this practice justify it? I answer no, but, this has been recommended by Eberle and others who practiced where diseases were of a phlogistic character, hence the practice.

I have by no means found it necessary or even safe in my practice, but on the contrary prejudicial and dangerous for the safety of the patient, to follow this course of practice in this malarious region. I do not mean to say that I would abandon all other remedial agents for tonics. On the contrary I would make use of all other means indicated, never, however, losing sight of the modifying influence of malarial poison. By watching their effects closely I have become more and more convinced of the propriety of using quinine, wine, brandy, and carb. ammonia in many diseases in which an Eastern physician would consider such treatment detrimental to the patient.

Some of the diseases to which I more particularly allude, are inflammation of the throat and tongue cynanche tonsillaris, pleuritis, peripneumonia, rheumatism, continued fevers, di-

arrhoea, cholera infantum, convulsions of infants, &c., in fact there is scarcely a disease in this climate in which, to use a familiar expression, the "ague" has not something to do in producing the derangement. Perhaps some may question the propriety of giving quinine, wine, brandy and ammonia in inflammations, such as pneumonia. It is my opinion, however, that patients with what is called "lung fever" have for want of stimulants and tonics sunk under the prostrating influence of malarial poison.

It is necessary to use them sufficiently to support the patient, while at the same time other means may be resorted to combating inflammatory action. This I conceive to be the only true and rational course of treatment in this disease, for if we commence with and depend upon depletion alone we shall soon have a state of debility which even by the help of stimulants we shall not be able to remove. The comparative value of the two modes of treatment is shown in the following case,

On the 23d. of March last I was called in consultation to see a patient about 17 years of age; who had been laboring under pneumonia five days. The treatment up to this time, as I was informed, had consisted in the administration of purgatives, sedatives, alteratives, and anodynes. The attending physician had given up all hopes of the patients recovery.

I proceeded to examine the patient and found the features sunken and pale, lips blue, profuse perspiration over the face and chest, extremities cold, breathing irregular, hurried and laborious, the right lung almost wholly impervious to air, crepitant rattle distinct in some portions, but a total absence of the healthy vesicular murmur, left lung also partially diseased, tongue dark yellow or brown and dry, teeth covered with sordes, coughed some and with great difficulty succeeded in occasionally raising a frothy bloody matter; in fact impending suffocation threatened the patient's life. Pulse a mere undulating line. This was the condition of the patient at 10 o'clock A. M. Prescription. Quinine gr. 1, sulph. acid

ggt. 1, vinum f3i, every half hour. Sub. mur. hydrarg. grs. iii, every four hours with a blister over the chest. Ten o'clock, P. M., pulse more full and distinct, constant low muttering delirium, jactitation, picking of the bed clothes. Prescribed quinine grs. iv, sub. mur. hyd. grs. iv, a small opiate to prevent action of the bowels, repeated every three hours alternately with carb. ammonia, grs. iv, camph. grs. ii. The blister having drawn well, it was dressed with mercurial ointment. Saw him next morning—not much alteration. Continued the treatment—ordered for drink slippery elm and toast water. Evening—less jactitation, body and lower extremities moist, tongue not so much parched, not much change in the condition of the lungs, bowels moved by enema, discharge dark and offensive; continued the treatment, and applied another blister over the right side of the chest. Next morning found him manifestly worse. By the directions of the attending physician, the camph. and am. had been omitted. Extremities cold, palor of the countenance, eye-ball fixed immovably. Gave him pretty freely of a solution carb. am., applied sinapisms to feet and legs, had him thoroughly rubbed with spirits and an infusion of red pepper, and ordered the former treatment to be continued, and on no account to be discontinued. From that time forward, this patient continued to mend, and has since to all appearance, entirely recovered. I could cite numerous other cases illustrative of the efficiency of the treatment recommended above. In cases where I am called in the first instance I commence with the supporting treatment, and do not suffer my patients to sink so low. Usually the quinine and ammonia will be sufficient but often in the later stage I use brandy or wine. This course should be steadily persevered in.

Part 2.—Reviews and Notices of New Works

ARTICLE I.

Lectures on the Physical Phenomena of Living Beings. By CARLO MATTEUCCI, Professor in the University of Pisa. with numerous wood-cuts. Translated under the superintendence of JONATHAN PEREIRA M. D. F. R. S. &c. Philadelphia: Lea and Blanchard. 1848. pp. 388 12 mo. (From the publishers,)

No science has more reason to be proud of her votaries than medicine. Physicians have been behind no other class of philosophers in the investigation of truth; extending their researches in every direction, they have neglected no science that might throw light on the nature and treatment of disease. The world is mainly indebted to physicians for the great discoveries in organic and inorganic chemistry, discoveries which have had not only an important bearing in the healing art, but on many other arts that minister to the comfort and convenience of mankind. If natural philosophy boasts of her Newton, La Place and Herschel; medicine may point with pride to Pare, Galvani, Harvey, Jenner, Berzelius, Liebig and a host of others whose names will be mentioned with respect until gratitude ceases to be a trait of human nature. To the honor of the profession be it said that its members generally are at all times ready to discuss and appreciate the merits of any invention or discovery, and give it at once a practical application to the relief of suffering. No sooner had Galvani demonstrated the influence of electricity organized tissues than physicians in all civilized countries imagined the possibility of making the discovery useful in the treatment of disease, and although they ran into divers

absurdities, although keen sighted charlatans made the discovery of the illustrious Italian the means of practising monstrous impositions on the multitude, chaos was soon reduced to order, and the therapeutical value of electricity to a considerable extent defined and established. So it has been with all discoveries relating to our profession. Upon the announcement of any new theory or discovery, experiments have been made with wonderful ingenuity and industry, for the purpose of testing the truth and applicability of the new doctrine.

The work before us has for its object the application of the recent discoveries in chemistry and the general laws of natural philosophy to the explanation of the phenomena of living beings. The high character of Dr. Pereira is a sufficient guaranty that the work is faithfully translated, consequently we may rely with confidence on the work as a correct exposition of the views of the Pisa professor. The work is in many respects new, or perhaps it would be more proper to say that so far as we know, the design is purely original. Many of the items composing the work are contained in various treatises on chemistry and Physiology; these have been collected, properly arranged, and made subservient to the design of the learned author.

It has been for ages a problem with physiologists and scientific men, to solve this question; what is life? What is called the vital principle has in vain been sought in the brain and its appendages, and in the circulating system. Various have been the theories which have been from time to time advanced, supported with much ingenuity, and successfully demolished. Observing that organization was necessary to support life, Richerand supported with much ability the no less unphilosophical than atheistical dogma that life was the result of organization; on the other hand, the fact that life was essential to the perpetuity of organization, led others to the equally fallacious conclusion that organization was the result of life. Others again, observing the wonderful effects of electricity on the animal economy, were induced to believe

that the long sought agent was to be found in the electric fluid—that the brain was the generator, and the nerves the conductors which distributed the fluid—that all diseases were but disturbances of the electric equilibrium, and that a man was ailing in proportion as he was positive or negative. Prof. Matteucci avoids all discussion on this point, confining himself to a detail of numerous and varied experiments both on the dead and living animal, giving a few brief general conclusions as he goes along, without involving himself in the defence of any particular doctrines or opinions.

He sets out by observing that living beings are endowed with the general properties of all natural bodies; that they are extended, impenetrable, divisible, and porous. This is true enough; but living beings have properties peculiar to themselves; properties which, in a remarkable manner, distinguish them from inorganic bodies, and which should be taken into the account by the experimenter. Inorganic bodies are homogeneous in their character; organized bodies are heterogeneous. One who sees a cubic foot of granite, sees all that composes the rock from which it was quarried, but he would know very little of the structure of an animal by seeing only a portion of it. The chemical character of organic and inorganic bodies is essentially different. The phenomena of organized bodies, when under the influence of the organic or vital force, are essentially distinct from the purely chemical processes which are set up after death, and result in the destruction of the organization; hence laws deduced from experiments on dead animal tissues, are not to be regarded as universal laws in the explanation of vital phenomena; and it would be difficult if not impossible to state with precision how far such conclusions are really applicable to the living animal economy. We do not assume that because of these differences, caloric, electricity, light, and chemical affinity act entirely differently in the two classes of bodies; nevertheless we suggest that the vital force in many instances modifies to a greater or less extent, the effects of the above

named agents. Again—nearly all the experiments instituted with the purpose of elucidating the laws of physiology and organic chemistry, have been performed upon the lower animals. Now, without stopping to discuss the humanity of subjecting brutes to torture, we will observe that the results of such experiments are to be received with caution, and we are bound to doubt whether the laws of human animal organization are identical with those governing the manifestations of vital phenomena in the sheep or the dog. We are compelled to believe that the more highly organized brain and nervous system of man constitute an important element in all vital processes, and modify, to some extent, the laws which hold good for the lower animals. We will cite a case in illustration of this remark. A quack announced that he had invented a styptic which would prevent hemorrhage from large arteries, and invited the faculty to witness his experiments. In presence of some physicians, he severed the carotid of a sheep, applied his nostrum, and the animal went on its way rejoicing, much to the amazement of the doctors and the glory of the charlatan. Presently, however, it came to be known that the carotid of a sheep might be cut across without a fatal result, even when no measures were adopted to arrest the flow of blood. This, which we know could, by no possibility, occur in man, is cited to sustain what we remarked above, that experiments performed upon brutes, will never perfectly elucidate the laws which govern man's physical structure. We do not bring forward these suggestions against the volume before us, or for the purpose of casting discredit upon the experiments which were undertaken with the view of discovering the laws of animal life, but for the purpose of warning our readers against falling into the error of supposing that an animal is merely a superior piece of machinery governed by the general laws of mechanics, and driven by the force of chemical affinity, or that man's physical laws are identical with those which apply to the brutes. We regard the volume before us as being valuable not only

for the interesting matter it contains, but for the bearing it must have on the advancement of physiology. Where the chemist leaves off, the physiologist commences, and all will, after a moment's reflection, see how important it is that the starting point of the latter should be well established, in order that should there be error in his calculations or speculations, it may be rectified by recurrence to a basis which is known to be correct.

It is beautiful to see how one science simplifies and elucidates another. The wild vagaries of the humoral pathologists, founded on false physiological doctrines, and ignorance of organic chemistry, were overturned by the solidists, who were equally in error in overlooking the influence of chemical action upon the animal economy; but when the researches of Liebig, Berzelius, and others, were announced to the scientific world, physiologists began anew to construct their theories on a more rational basis, and pathologists began to discover that, as in other cases, truth lay between the extremes contended for by the rival sects. The investigation of physico-chemical phenomena will henceforth constitute a distinct department of scientific research, the foundation of which may be considered as erected by Prof. Matteucci. This research will doubtless be prosecuted with much vigor, and be productive of valuable results.

We pass over that portion of the work devoted to the consideration of imbibition and capillarity, not because this subject is by any means devoid of interest, but in order to devote more space to the consideration of the highly interesting, but not generally understood, phenomena of endosmose and exosmose. We shall not stop to enter into the discussion as to whether the discovery was first made by Dutrochet or not, but proceed to present a brief *expose* of the experiments of Prof. Matteucci, and the practical deductions to be derived therefrom. An endosmometer consists of a glass tube whose lower end is closed by an animal membrane; within this tube is placed an aqueous solution of gum, sugar, &c.; the lower

extremity is then plunged into water, when, even contrary to the force of gravity, the water will permeate the membrane so as to elevate the fluid in the tube, while a certain quantity of the solution placed in the tube, will find its way into the reservoir beneath. The first of these results is styled *endosmose*, the latter *exosmose*. As a general rule, endosmose takes place from the rarer to the denser liquid; to this alcohol forms an exception, the water being generally attracted to it. The rapidity with which endosmose takes place, varies generally in proportion to the excess of density of the interior over the exterior liquid. But solutions of the same density when composed of different substances, vary in the degree to which they produce endosmose; thus representing the intensity with which endosmose takes place from water to a solution of gelatin by 3; that when gum is substituted for the gelatin will be 5; with sugar 11; and with albumen 12. There is a singular phenomenon observable when certain acids are placed within the endosmometer. Thus when we use hydrochloric acid of the specific gravity of 1.02, endosmose takes place from the water to the acid; but if the acid have a density of only 1.015, the current sets in the opposite direction. The force of this current, when syrup is used as the interior liquid is estimated as sufficient to raise a column of mercury one hundred and twenty-seven inches, which is a pressure about equal to four and a half atmospheres. Of course various theories have been put forth to explain endosmose and exosmose; all of which our author demolishes, without offering any of his own, contenting himself with stating the conditions necessary to the production of the phenomenon, which conditions he supposes to be—1st, that both fluids should have an affinity for the membrane; and second, that they should readily mix with each other.

It will be at once perceived that this discovery must have a very wide application in the explanation of the phenomena of living beings, and we are tempted to give a summary of these applications, though in so doing we depart from the or-

der observed by the author of the work before us. The experiments of Matteucci were very ingenious, and varied in all conceivable ways. He used the skins of various animals, as well as their stomachs and bladders, turning their different surfaces first to the water and then to the solution contained in the endosmometer, carefully noting the differences in each experiment. These differences are very curious and worthy of notice. With the skin of the torpedo, placed with its external surface towards the interior of the endosmometer, the contained fluid rose thirty millimetres,* while, when the membrane was reversed, the fluid attained a height of only six to eight millimetres. Nearly the same results were obtained with the skins of the frog and eel.

The second class of experiments was performed with the stomach of the lamb, cat, and dog, and the mucous membrane of the gizzard of a fowl. Placing the internal surface of the stomach of the lamb towards the interior of the instrument, the fluid rose 56 millimetres; reversing the membrane, the fluid reached a height of sixty-six to seventy-two millimetres. With the solution of the white of an egg, a contrary effect was produced; with a solution of gum arabic, the elevation was very slight. Using the stomach of the cat with a solution of sugar, the elevation was thirty-eight millimetres; reversing the membrane, the elevation was fourteen millimetres. The same was observed with the stomach of the dog. With the mucous membrane of the stomach of a fowl, the difference of elevation is not much influenced by the position of the membrane; and, contrary to what takes place with other membraees, endosmose always takes place from alcohol to water.

The third class of experiments was performed with the urinary bladder of the ox. Placing the internal surface towards the interior of an endosmometer containing a solution of sugar, the liquid rose to the height of eighty to one hundred

* A millimetre is 0.03937 of an inch.

and thirteen millimetres; reversing the membrane, it rose to sixty-three to seventy-two. With a solution of gum arabic the membrane being in the first mentioned position, the elevation was only from seven to eighteen millimetres, while in the reverse position it was from twenty-two to fifty-two. We give in the author's own words, the conclusions at which his numerous experiments enabled him to arrive.

1st.—The membrane interposed between the two liquids, is very actively concerned according to its nature, in the intensity and direction of the endosmotic current.

2d.—There is, in general, for each membrane, a certain position in which endosmose is most intense; and the cases are very rare in which, with fresh membrane, endosmose takes place equally, whatever be the relative position of the membrane to the two liquids.

3d.—The direction which is most favorable to endosmose through the skins, is usually from the internal to the external surface, with the exception of the skin of the frog, in which endosmose, in the single case of water and alcohol, is promoted from the external to the internal surface.

4th.—The direction favorable to endosmose through stomachs and urinary bladders varies, with different liquids much more than through skins.

5th.—The phenomenon of endosmose is intimately connected with the physiological condition of the membranes.

6th.—With membranes dried or altered by putrefaction, either we do not observe the usual difference arising from the position of their surfaces, or endosmose no longer takes place.

From a detail of the foregoing experiments on the skins of those animals which live in the water, it will be seen how admirably nature has provided for their preservation and comfort. All are familiar with the peculiar character of the skin of the eel. By referring back to the experiments detailed above, it will be noticed that endosmose from water to gum and albumen, is much weaker when the exterior of the skin is turned towards the water; were it otherwise these animals would become, as it were, water-logged. The same is doubtless true of all aquatic and amphibious animals from whose skins a mucus secretion is discharged. From the ex-

periments performed upon the stomachs of animals, we are at once struck by the differences exhibited by those of the herbivorous and carnivorous classes, and it would be a matter of the highest interest to pursue the investigation of this subject with the view of ascertaining more exactly the difference in the digestive processes of the two classes of animals though in a process so complicated as digestion, this inquiry must necessarily prove one of much difficulty.

The elementary cell doubtless owes its nutrition to this property of membranes, as do the ovules in the oviducts of mammiferous animals. In this way may be explained the actions of certain remedies in the system. It was noticed by Poesenille, that endosmose took place through animal tissues from the serum of the blood to certain saline solutions. Now the action of purgatives of this class is to produce copious serous evacuations, and without asserting that this effect is produced solely by the endosmotic action, there is every reason to suppose that this effect is produced solely by endosmotic action, pose that this property of the membranes is concerned in the action of purgatives of this nature. On the other hand it has been observed that morphia introduced into a saline solution, checks the current from the serum to the salt, and ultimately reverses it. This serves, in a great degree to explain the action of opium, and may, perhaps illustrate the action of the whole catalogue of astringents. The use of saline remedies in conjunction with opiates, has been suggested as a method of treatment in cholera, and we are bound to believe the suggestion is at least philosophical; how far it is practically valuable we know but little.

In the few experiments performed with the intention of elucidating the phenomena of endosmose, it has been found that when a pair of lungs are partially inflated with oxygen, and introduced into a jar of carbonic acid inverted over water, the lungs become distended so as entirely to fill the vessel; and upon analysis it was found that the gas contained in the lungs consisted of two-thirds oxygen and one-third car-

bonic acid; that in the jar being composed of one-fourth oxygen and three-fourths carbonic acid. On inflating the lungs to the extent of their capacity with carbonic acid, and immersing them in a jar of oxygen the lungs collapsed, and it was found that the bulk of the carbonic acid which escaped was greater than that of the oxygen which found its way into the pulmonary cells. These experiments would seem to indicate that the endosmotic current sets from carbonic acid to oxygen. There is a difficulty in applying these experiments to the explanation of the phenomena of respiration; for the bulk of carbonic acid exhaled from the lungs never exceeds that of the oxygen introduced, but, according to some authors it is less.

It would be interesting to enquire to what extent many other of the processes of the animal economy are influenced by the endosmotic property of membranes; as, for instance, absorption and exhalation; but having already occupied considerable space with our remarks on endosmose, we will, for the present, take leave of the subject, hoping that some of our readers may be instigated to pursue the subject and furnish us with the fruit of their researches.

Lecture IV is taken up by a consideration of the phenomena and doctrine of absorption and exhalation. It was for a long time supposed that the lacteals and lymphatics were the only vessels concerned in this process; but recent investigations have demonstrated that not only these, but the arteries and veins are actively engaged in it. It was also supposed that the mouths of vessels opened along the track of the intestinal tube for the purpose of absorbing the chyle and carrying it to the thoracic duct; but microscopic anatomy has shown that there is no such thing as an open vessel in the human economy; the arteries terminate in the veins, and the lymphatics form an uninterruptedly continuous network. Absorption, therefore, consists in imbibition and transmission, and all the vessels participate in the function.

The only conditions necessary to it, and an experiment illustrative of those conditions, are thus set down by the author:

Physical Conditions of Absorption.—In a word, absorption is always effected under the following conditions:—

1st.—A vessel with organic sides or walls.

2d.—An anterior liquid capable of being imbibed by the tissue composing the walls.

3d.—An internal liquid, also capable of being imbibed by the walls; of intermixing with the exterior liquid; and of circulating in the vessel with more or less rapidity.

Nothing, consequently, can be more physical than a phenomenon thus constituted. I will demonstrate, by an experiment, the truth of this assertion. Here is a long piece of vein taken from a large animal; it is attached at one end to a tube connected with an opening in the lower part of the side of a glass bottle; the other extremity is tied to a small bent glass tube, furnished with a stop cock. I fill the bottle and consequently the vein also, with water. I immerse a portion of the vein in water acidulated with sulphuric or hydro-chloric acid. At first the liquid in the bottle gives no indication of the presence of the acid, but after a certain time, it does. If, instead of waiting some time, and leaving the liquid in repose, I open the stop-cock, I can immediately detect the presence of the acid in the liquid which flows out, but in the bottle it is not yet discoverable. That which happens with a portion of vein, will take place in the same way with the arterial trunk, and with tubes of clay, pasteboard, and wood. If the acidulated solution be contained in the interior of the vein; and if in'o the liquid of the basin, in which the vein is immersed, we pour some tincture of litmus, the same phenomenon is observed, that is, the acid will pass out through the coats of the vein, with a facility proportionate to the velocity of the current. The conditions of the phenomenon, are always the same; two liquids miscible with each other, and separated by a membrane capable of imbibing them, and the movement of the internal liquid which carries in a given direction, the liquid which has traversed the membrane.

Suppose, for a moment, that the direction of the circulation of the blood was inverse to that which it really is, but without any alteration of the structure and disposition of the blood-vessels; we should then no longer say that the veins absorbed, but, on the contrary, that absorption took place by

the arteries. Such is the very simple physical phenomenon of that function.

A few words may be necessary as to the changes wrought by the influence of absorption. If we place a colored solution on a filter of bone black, the liquid passes through while the coloring matter is retained. So with membranes; some substances will pass through them, others will not, and it is therefore fair to infer that many of the fluids of the body, are susceptible of modification in this way. It was formerly held that the secreting organs, such as the liver and kidneys, were merely pieces of filtering apparatus. Now although this may appear to be a coarse conception, there may be more truth in it than would appear at first sight, but further researches are needed to elucidate this obscure subject.

Lecture V is devoted to the consideration of digestion. Alimentary substances are divided into three classes. First, the nitrogenized compounds; second, fatty matters, and third, that class including starch, gum, and sugar. Prof. Matteucci regards fibrine, caseine, and albumen as identical in composition. This, though nearly correct, is not absolutely true as can be seen by reference to almost any of the standard works on chemistry. By reference to a foot note by Dr. Pereira it will be further observed that the existence of the compound announced by Mülder as the base of the albumen-fibrine and caseine, and termed by him *proteine*, is by no means well established. Late researches of Liebig throw much doubt over this theory, as well as the isomerism of the three elements above mentioned. This is a fact well worthy of attention. We are disposed at this time to adopt the opinions of Liebig, notwithstanding the experiment of Denis which is cited by Matteucci as proof positive of the isomerism of these bodies. The experiment was this. Fibrine is converted into albumen by being dissolved in a saturated solution of nitrate of potassa, but this holds true only for the fibrine of the venous blood, that from the arteries undergoing no such

change. Venous fibrine when exposed to the action of oxygen lost this property, the same time converting the oxygen into carbonic acid. Now it appears to us that this experiment proves nothing except that the fibrine of the venous blood is characterized by some peculiarities, which the fibrine of the arterial blood does not possess; and that so far from being isomeric with albumen and caseine, it is not constant in its own chemical composition. There is another fallacy in this experiment: there is a probability that there is chemical reaction between the nitrate of potassa and the fibrine, which might account for the phenomenon. What would we think of the man who would tell us that sulphuric acid and sulphate of potash were isomeric, and assign as a reason for his belief that one was converted into the other by being introduced into a solution of nitre. To say the least of this experiment it lacks exactness. We should have been informed whether the dissolved fibrine was found to be identical with that of the venous blood, and whether the solution of the nitrate was in no respects changed in its chemical character during the process.

An illustration of that wonderful class of phenomena termed catalytic, or actions of contact, is afforded by the function which pepsine performs in the process of digestion, influencing the process without taking any particular part in it; as a boy sets two dogs to fighting without espousing the cause of either. The action of this is analogous to that of diastase in the vegetable world, and platinum sponge upon a mixture of hydrogen and oxygen. The *modus operandi* of this article, together with other interesting matters pertaining to the process of digestion, will be found in the subjoined extract.

I have shown you, in glasses, an infusion of pepsine to which a few drops of hydrochloric acid have been added. Into one of these small glasses has been put some coagulated albumen; into another some fibrine. The vessels

thus prepared have been placed for ten or twelve hours in an atmosphere heated to thirty degrees centig. [eighty-six degrees Fahr.] and the albumen and fibrine have already in a great measure disappeared, there remain only some small fragments which are already transparent on the edges, and which will shortly entirely disappear. If I neutralize the acid and then evaporate the solution, I can easily reproduce the albumen and fibrine, which have not been changed in their nature, but have merely dissolved by contact with the acid infusion of pepsine. This substance acts, therefore, in the solution of fibrine and albumen, as a body endowed with catalytic properties, and their solution is effected by an action of contact. It is only in the stomach, or by certain glands situated in the mucous membrane of this viscus, that the acid solution of pepsine or the gastric juice is separated. I have tried the effect of placing pieces of the small or large intestines in a very weak solution of hydrochloric acid, the solution never acquired a solvent property—it became gastric juice only by contact with the membranes of the stomach.

The property with which pepsine is endowed requires the, constant presence of free mineral organic acid. If, on the other hand, pepsine be dissolved in an alkaline liquid, its catalytic action becomes modified, as we shall hereafter find.

Lastly, I may remark, that pepsine loses its properties and becomes invaluable when heated beyond 80° centig, [122 Fahr.]

Azotized neutral substances, dissolved in the stomach by the acid liquid, or by the catalytic action of pepsine, pass into the blood nearly by the imbibition of the capillary blood-vessels of the stomach. Water, and colored alcoholic drinks, introduced into the stomach, are also absorbed; they do not pass beyond this viscus, nor are they to be found in the chyle; yet they reach the blood. Bouchardat and Sandras fed animals with fibrine, colored with either saffron or cocheneal, and yet could never detect a trace of the coloring matter in the chyle. Moreover, animals fed on fibrine, and others which were kept fasting, yielded, when killed, chyle always of the same kind: the contents of the intestines in no way differed, except, that in the animals fed on fibrine, a portion of the latter was found in the stomach incompletely dissolved. We know, also, from the celebrated experiments of Tiedman and Gmelin, that the quantity of fibrine contained in the lymph and chyle, after a fast, is not less than that which is formed there after digestion. The results are the same when

coagulated albumen, gluten, and caseous matter, are employed instead of fibrine. The digestion of these azotised neutral substances is, therefore, a mere solution, effected by an action of contact, and an absorption of these taking place chiefly in the stomach. Thus then, nothing is more physical than this part of digestion.

The mastication of aliments impregnated with a slightly alkaline and warm liquid, is an entirely physical operation similar to that which we practice in our laboratories, in order to effect the division of a body, and thereby to promote its solution.

The gastric juice which the stomach secretes, especially at the moment of digestion, is an infusion of pepsine in acidulated water; and if we cause it to act on coagulated albumen, on fibrine or casein, the solution of these substances can effected as well in a properly warmed receiver as in the stomach.

The movement of the walls of the stomach promotes the action of the infusion of pepsine upon the substances to be dissolved, just as all agitation aids the reaction of two dissolved bodies, or the solution of a solid in a liquid.

This movement of the walls of the stomach, is also of assistance in another way, by incessantly removing the points of contact between them and the matter which they contain, the absorption of the liquid portion of this substance is effected more readily. The influence which the division of the eighth pair of nerves has in disturbing digestion, is ascribable, in part, to the cessation of these movements, which are dependent on the action of the nerves. Moreover, their section produces a great disturbance in other functions indispensable to the integrity of the animal economy.

Recent physiological and anatomical researches, would seem to prove that the germ of all animal tissues is the cell, and it is an interesting investigation to trace the origin of it. Our author's theory of the matter amounts to the following. In the chyle and lymph are suspended a vast number of minute bodies, from one to two thousandths of a line in diameter, formed of a fatty substance and enveloped in a membrane: several of these unite by some process and form a globule. For a theory of the nourishment of these cells we must refer back to what has been said of endosmose.

In respiration the blood is changed in the lungs from venous to arterial by the absorption of oxygen and evolution of carbonic acid. It was for sometime supposed, and for aught we know to the contrary is still believed, that the lungs were the sole agents concerned in the manufacture of carbonic acid, and that oxygen was introduced into the venous blood only through the medium of the lungs. But it is now known that oxygen may be introduced into the circulation through the medium of the skin. Sorg immersed his arm in oxygen and found at the end of four hours two thirds of it had disappeared. Gasses injected into the pleura disappear, and the same is doubtless true of all the other cavities of the body. Now this being the case, and the veins being absorbents, we may reasonably conclude that carbonic acid is formed in those vessels and carried to the lungs to be eliminated. Fishes will live with their heads out of water provided their bodies are still submerged. Frogs and snakes can exist without lungs, but perish if their skins are varnished. Here is a function of the skin not usually taken note of, but one that is worthy of the attention of the practitioner. It has been found that the gasses found in the blood are carbonic acid, oxygen and nitrogen. In arterial blood the volume of these is greater than in the venous blood: in the former the oxygen is double that in the later, while the venous blood contains a greater proportion of carbonic acid and nitrogen than does the arterial. So far as our knowledge of the phenomena of respiration at present extends, they may be looked upon as purely physico-chemical phenomena. We would gladly dwell awhile longer on this part of the subject, as there are many very interesting topics connected with the theory of animal heat, but there are other matters in the volume which demand a notice.

In lecture VIII we have an account of phosphorescence as exhibited in living beings. For this purpose a number of experiments were tried upon the glowworm. The phosphorescent nature of this animal seems to some extent independent

of the vital force, as the phenomena does not cease with life. Carbonic acid was found to destroy this property, in a few moments was it again restored by the action of atmospheric air or pure oxygen. When the insects were confined in a limited portion of atmospheric air, the phosphorence after a time disappeared, and it was found upon examination that the oxygen had disappeared and been replaced by an equal volume of carbonic acid. In chlorine the light was soon extinguished, nor could it be restored by the introduction of oxygen. Oxygen sustained the phosphorescence until carbonic acid was evolved equal in bulk to one third of the oxygen originally introduced.

We come next upon the most interesting if not the most important portion of the volume, that which treats of electricity in connection with the phenomena of animal life. In considering this subject there is at the outset a great error to be avoided. Too many are in the habit of regarding electricity as the cause of the various chemical actions which are going on in the body. This is just the reverse of what is true. Electricity is doubtless the effect, not the cause. As before observed we think it a course conception to liken the animal to an electric or galvanic apparatus. In his researches on this subject our author used what he terms the *galvanoscopic frog*; that is the leg of a frog with the crural nerves attached to it. This is introduced into a glass tube, and thus becomes insulated. If we cut into the muscle of an animal and touch with two different filaments of the nerve, a motion of the muscle on each side of the wound, the muscles of the frogs leg manifests such a contraction as would be produced by bringing it in contact with the electrical apparatus. If instead of the frogs leg, we use in this experiment a delicate galvanometer the same effect will be produced. The evidence of the muscular current is much more clearly demonstrated by the following experiment: take five or six frogs cut them in half, disarticulate the thighs from the legs, and divide the former transversely; take the lower halves of the

thighs, and arrange them on a varnished tray having the cup shaped depressions in it. The thighs are arranged in the following manner: the first has its external surface contained in one of the cups of the tray; the next one has its external surface in contact with the internal surface of the first, and so on alternately, the last one having its *internal* surface in one of the cup shaped depressions of the tray. Filling these cups with a saline solution, and bringing the galvanometer in contact with the pile, an electric current is found to travel from the internal to the external surface of the muscles. Very feeble currents have also been observed in other tissues, such as the adipose, glandular &c. It has been found that this current is totally independent of nervous influence, for we presume that no one believes that the nerves exercise any control after death, nor indeed is the experiment in any way varied by depriving the muscles of the nerves which supply them. If in the experiment living frogs are substituted for dead ones, the same result is produced with a much better effect. In an animal badly nourished the electric current becomes weaker; if the muscles have been subjected to an inflammatory process, the current is augmented. Poisoning the animal produces no effect, but submitting it to the action of sulphuretted hydrogen almost entirely destroys the current. What is the cause of these electrical phenomena? Liebig supposes they are owing to the action between a free acid in the muscles and the alkaline constituents of the blood. This theory our professor thinks untenable, and explains it by supposing that it is owing to the contact of the oxygen of the blood with the muscular tissue which becomes transformed in the process.

By experiment it was found that if the spinal marrow was not cut across and a current was passed along the crural nerves, spasmodic action was excited in the muscles of the neck and head, whereas when the integrity of the spinal marrow was destroyed, no such affect was produced. This goes far to illustrate the doctrine of the reflex function of the ner-

vous system, and in this point of view is very valuable. But perhaps the most interesting phenomena, and certainly the most important in a therapeutic point of view, are those exhibited by what are called the direct and inverse current. By the direct current is meant one transmitted in the direction of the nervous ramifications; that is, from the centre to the periphery. By the inverse current is designated that passed from the periphery to the centre. It has been observed that after a time the direct current diminishes to a great extent the excitability of a nerve, while the inverse current has a contrary effect. The therapeutic indications are obvious. If we wish to bring electricity to bear in tetanus, hydrophobia and other diseases accompanied by high nervous excitability, we use the direct current; on the other hand, in paralysis, we would take care to direct the current in the opposite direction. Ignorance of this action of the electric fluid, has doubtless been to a great extent the cause of the failure of this agent in the treatment of disease, for we can at once see that a misapplication of the remedy would aggravate the disease. Are we to infer from this that the nervous force is identical with electricity, and that nervous diseases result from a disturbance of the electric current? Here is what our professor says on this point.

No electric current in the nerves.—It was important to search for the presence of an electric current in the nerves of a living animal. I shall refrain from noticing here all the experiments which have been undertaken with this object in view, and which have terminated in the announcement, at one time that this current did exist, at another that it did not exist. The most conscientious and best established conclusion is this:—*In the present state of science, and with the means of experimenting which we at present possess, no sign of the electric current is found in the nerves of living animals.*

Some persons have asserted, that a steel needle introduced into the muscles perpendicularly to the direction of their fibres became magnetic, especially at the moment when the muscles contract. From this it has been concluded, that there exist-

ed an electric current in the nerves, and that the circuit was established as in a spiral or an electro-dynamic cylinder.

I have repeated these experiments, by introducing steel or iron needles into the muscles of living animals, and in all directions relative to their fibres. In order to convince myself of the magnetization of the needles, thus plunged into the muscles, I made use of those of a very good astatic system, and even those of the sideroscope of Lebaillif. I never obtained an affirmative result. I placed the recently prepared thigh and leg of a frog, in the interior of a spiral of varnished copper wire, the extremities of which were connected with those of second and smaller one, in which there was a soft iron wire. I afterwards irritated the nerve of a frog, observing at the same time, if an induced current traversed the spiral, and magnetized the iron wire. All my researches were fruitless.

I likewise tried the effect of introducing into an exposed nerve of a living animal, the conductors of a very delicate galvanometer by two points as far apart as possible. I operated upon animals under the influence of certain narcotic poisons, and I excited strong muscular contractions in them, at the moment when I placed the two wires of the galvanometer in the nerve; but I must confess that, whenever the experiment was well made, I never obtained evident and constant traces of the electric current.

At the school of Alfort I made in conjunction with Longet, an experiment of this kind upon a horse. We employed a very delicate galvanometer; the nerve was exposed for a considerable extent of its course, and I could traverse it with the platinum extremities of the galvanometer, by passing from a distance of 2 or 3 centimeters to that of 15 or 20 (from $\frac{7}{8}$ of an inch to $\frac{7}{8}$ inches). We never obtained distinct signs of the derived current, and in a constant direct-even when the muscles of the animal were violently contracted.

Lastly, I may add that, from what we know of the properties of electricity, and of the laws of its propagation, it is impossible to conceive the existence of a current circulating in the nerves. In order that an electrical current should pass from one extremity to the other, it would be necessary, to compare the nerve to a metallic wire varnished or otherwise insulated, an assumption which is not in accordance with fact. An electric current which, subjected to the will, would set out from the brain to reach the muscles, by traversing the nerves.

could not be stopped in its course by the ligature of the nerves; whereas, we well know, that the propagation of the nervous force is prevented by that proceeding. Lastly, its circulation in the nerves requires that the nervous system should form a closed circuit, but the labors of anatomists are very far from having proved such an arrangement, especially in the ultimate ramifications in the muscles, where it would be especially necessary.

The remaining hundred pages of the volume are mainly taken up with the consideration of the voice, the ear, the eye, the mechanism of the muscles, and the circulation. These matters although of much interest we have not time to mention more in detail, contenting ourselves with recommending this valuable little volume to all who wish to enter on the higher walks of the profession, and to all who desire to become what a physician should become, an adept in every science that may be available in the relief of suffering.

Indianapolis, April, 1849.

E. G. M.

ARTICLE II.

Treatise on dislocations of the shoulder. By GEORGE O. JARVIS, M. D., author of *Lectures on Fractures and Dislocations &c. &c.* Together with important cases illustrating the benefits of the adjuster. Compiled by George Kellogg A. M. Derby, New Haven County Conn. Birmingham. 1848.

We find upon our table a small pamphlet of 32 pages, with the above title, indicating as one would suppose, that the reader might expect to find in the body of the work something truly valuable in a "treatise" devoted exclusively to the consideration of luxations of the "shoulder".

George Kellogg, A. M., the compiler, says.

At the solicitation of many members of the profession, whose opinion I highly esteem, I have been induced, with the consent of the author, to offer to the surgeons of the United States a reprint of this learned and conclusive article, and to add to it a few of the remarkable cases which strikingly attest and exemplify the advantages—the indispensable necessity of the Adjuster. Being the sole manufacturer of that Instrument in America, the value and importance of which are so clearly proved in the following pages, I cannot but hope that while I am, in this way, doing what I can, to promote the usefulness and unfailing success of the whole body of practicing surgeons; they, in their turn, will not be regardless of the claims of humanity upon them, nor of their own professional honor, in these days of quackery, but will encourage, by their influence and example, the universal introduction among them of an apparatus so valuable.

Or in other words, George O. Jarvis M. D. has invented some kind of an instrument, which he calls by the imposing name of the Adjuster, and, as we have reason to believe, judging from the tenor of the pamphlet before us, has chosen to employ his inventive genius and standing as an M. D. for the pecuniary benefit of himself and George Kellogg A. M.: “the sole manufacturer of the instrument in America”.

Now since it is true that nothing of importance is said in the pamphlet in reference to the symptoms or treatment of dislocations of the shoulder, excepting so far as to condemn the practice of all those who are so unmindful of its merits as not to purchase and use the aforesaid instrument, we are at loss to know why it was published “at the solicitation of many members of the profession.” unless, as is possible, the physicians of Connecticut consider themselves justified in employing to the best advantage the peculiar talents for which the people of that state are so justly celebrated, whether it be in the invention and “sole manufacture” of wooden nut mugs or Jarvis's adjusters.

H

ARTICLE III.

Report of the Select Committee to whom was referred the subject of the petition of William T. G. Morton of Boston, asking remuneration for the discovery of the Anaesthetic influence of Sulphuric Ether. Made to the H. R. United States, by Dr. EDWARDS, Chairman.

This report argues at considerable length the claims of Drs. Jackson and Morton, to the discovery of an agent capable of preventing pain during surgical operations, but does not notice Dr. Horace Well's previous discovery and announcement of the fact in Boston, that Nitrous Oxide will have that influence, perhaps because the friends of the other persons and not those of Dr. Wells were pressing their claims to the discovery.

We think the dispute about the question of priority, is likely to exert an influence upon the reputation of the claimants, similar to that of taking out a patent for it.

The conclusions of the report are more favorable to the claims of Dr. Morton as he put to the test of experiment the agent. E

ARTICLE IV.

Transactions of the College of Physicians of Philadelphia, from Sept. 6th, 1848, to Jan. 2d 1849.

The appearance of these reports has become a matter of much interest, as they from time to time give a synopsis of the results of practice, by a large and highly intelligent body of physicians.

The present number is highly interesting, and the annual reports of Dr. Coats on the theory and practice of medicine, and of Dr. Griscon on Midwifery, are valuable contributions to our medical literature. E

ARTICLE V.

An Illustrated System of Human Anatomy, Special, General, and Microscopic. By SAMUEL GEORGE MORTON, M. D., Penn. and Edinb., Member of the Medical Societies of Philadelphia, New York, Boston, Edinburgh, and Stockholm, author of "*Crania Americana*," "*Crania Ægyptiaca*," etc. With three hundred and ninety-one engravings on wood. "*Oculis subjecta fidelibus*." Philadelphia: Grigg, Elliott, & Co., No. 14 North Fourth Street. 1849. Royal 8vo, pp. 642. (From the publishers.)

The prominent and most active medical men and writers of the present time may very properly be classed as follows: into hard working, sensible truth seekers; credulous, imaginative theorists; and experimentalists; each furnishing, from time to time, in books, pamphlets, and medical periodicals, matter adapted to the tastes and talents of every class of minds.

The work before us, by the justly celebrated author of the "*Crania Americana*," "*Crania Ægyptiaca*," etc., Dr. Morton, is a treatise upon one of the most important branches of the science of medicine, written in a chaste and concise style, superior to any work of the kind ever published in this country in its typographical execution and in the correctness of its illustrations, and is, in every respect, adapted to please and interest that best class of medical men who endeavor to

base their knowledge and rules of practice upon well-known anatomical, pathological, and physiological facts, rather than upon the visionary speculations of those who, under the garb of science, promulgate opinions and doctrines no less absurd in some instances, than those of the infinitesimal and eclectic schools.

The work adds additional lustre to the well earned reputation of the author, and is got up in a style which shows most conclusively that our American publishers, when sufficient encouragement shall be offered them, can furnish us books in every respect equal, if not superior, in quality of paper, style of plates, and typography, to the illustrated works, now, for the most part, obtained from abroad.

The nature of the work is such, that it would be difficult, if not impossible, to give an abstract of its contents in the small space in our journal allotted to bibliographical notices; we must, therefore, deny ourselves the pleasure we always take in noticing at large medical productions of this class, and say, in conclusion, that Dr. Morton's Illustrated Anatomy deserves a place in the medical library of every American physician and student, both on account of the intrinsic value of the work, and for the no less important consideration that it is the duty of the profession to encourage the talents and skill of American authors and publishers.

For the reasons given above, it will be recommended to students and adopted as a text book on anatomy in Rush Medical College. H.

ARTICLE VI.

The Plea of Humanity in behalf of Medical Education:—

The Annual Address delivered before the New York State Medical Society, and Members of the Legislature, at the Capitol, February 6, 1849. By ALEXANDER H. STEVENS, M. D., President of the Society, of the American Medical Association, and of the College of Physicians and Surgeons of New York, Member of the Philosophical Society of Philadelphia, etc. Published by the Society.

Anniversary Discourse before the New York Academy of Medicine, November, 8, 1848. By JAMES R. MANLEY, M. D. Published by order of the Academy,

Valedictory Address to the Medical Class of Transylvania University. By E. L. DUDLEY, M. D., Professor of General and Pathological Anatomy and Physiology. Published by the Class.

The first of these is from one of the sages of the profession whose teachings are sound, and whose style and matter are always of the most interesting character. It is a document of the highest order of interest, containing a large amount of statistical information in reference to the utility and influence of our profession, when rightly educated and properly skilled, upon the health, prosperity, and happiness of our race.

After showing the large indebtedness of the world to our profession for the great advancement of the arts and sciences, and for the impulse given by it to the cause of benevolence, in its various features religious, moral, and humane, the author says:

But the relations of medicine to education, to social happiness, agriculture, virtue, science, temperance, and philanthropy, however important, are of far less value than its legiti-

mate object, the restoration to, and the preservation of health. From the cradle to the grave, aye, even from a period antecedent to its birth, every individual enjoys the advantages of medical science. Almost every child receives the blessing of vaccination, and is thereby protected from a loathsome and often fatal pestilence. A very large portion of the community are placed by disease or injury in a condition in which their usefulness or their lives are preserved solely by medical skill.

Throughout the civilized world, the duration of human life has increased, and is steadily increasing with the advancement and diffusion of medical science and medical art.

In the city of Geneva, in the 16th century, 1 individual in 25 died annually. For the 18th century, 1 in 34; at the present time, 1 in 46.* With us the mortality is greater. I estimate it at 1 in 40, the proportion of childhood being larger and childhood being the period of the greatest mortality. In the British navy among adults, none of whom are very aged, the mortality is only 1 in 100. Seventy years ago the mortality was 1 in every 10. In 1808, 1 in 30; 1836, 13·8, among one thousand—a diminution to less than a seventh of the rate in 1770. In the American army, with a corps of medical officers, not excelled by that of any other country, the mortality is little over 1 in 300 per annum. In London the mortality in the middle of the last century was 1 in 32. In the year 1838, the mortality was 1 in 36. I quote from the annual report of the Register General. Within the last twenty years the mortality of Russia has been 1 in 27. Prussia, 1 in 36; France, 1 in 39·07; Holland, 1 in 39; Belgium, 1 in 43·01; England, 1 in 53·07; Sicily, 1 in 32; Greece, 1 in 30; Philadelphia, 1 in 42·03; Boston, 1 in 45; New York, 1 in 37·83† the immigrants have made our mortality greater than that of our sister cities; in other respects it has diminished with the advance of medical science. These statistical statements might be multiplied at great length; but enough have been given to show conclusively the prodigious extent to which human life has been lengthened with the advance and diffusion of medical science beyond its duration in former periods, and beyond its present duration in the less enlightened countries of Europe.

* *Annales d' Hygiene Publique.*

† *Bell on Longevity, N. Y. Hosp. Library.*

Again, in reference to the correct management of hospitals he says:

Until within the last two years the New York Alms-house, with its hospital, has been under political management. The profession had no part in directing or advising in regard to the choice of its physicians. The mortality during a period of 20 years was more than 20 per cent. per annum,

Two years since a new organization was made, and the whole establishment was placed under the control of one resident physician and an efficient corps of unpaid physicians and surgeons. During these two years, the mortality has been reduced to about 12 per cent. per annum, which is about 1 per cent. above that of the Pennsylvania Hospital, the Massachusetts General Hospital, and the New York Hospital; all which institutions have long been managed well.

A very large edition of this address has been published by the Society and the legislature of New York. This is encouraging, as it is only the diffusion of correct information amongst the people, such as this address contains, that is necessary to lead the community at large to appreciate scientific attainments and skill in our profession.

The proposition made by the eminent author for making medical education free, to have colleges supported by the state governments, furnishes matter for much argument pro and con. We have no doubt the plan would be advocated by many were there a reasonable prospect of its adoption.

The address of Dr. Manly shows the author to belong to the weeping school of philosophers, as he finds the profession wrong and growing rapidly worse. Too many medical schools, and incompetent teachers are among the causes of the degradation that has now come upon us. That there is room for great improvement we have no doubt, but we do not give up all hope, (although our staff and wig may be gone,) that our dignity may be so far restored that we will command the respect due our moral and intellectual worth. We know

of no place where an intelligent and upright physician who pursues his profession faithfully and steadily, will not occupy a station of respectability and influence in society. Quackery has always existed, and, for aught we can see, is likely to continue; but that it is to supplant the medical profession we have no fears.

The recommendation that physiology be made a branch of popular education is good, and as a means of qualifying communities to judge of the claims of scientific physicians to their confidence may be correct, but we opine if it be the only hope of a restoration of our professional dignity, many generations of us will yet go down to the grave undignified.

Prof. Dudley's Address is beautifully written, and dwells upon the bright side of the character of our profession, pointing out the pleasures attending its practice.

It is an eloquent appeal to the young physician in behalf of a pure morality and a lofty aim in his career through life, alike creditable to the author's head and heart. E.

ARTICLE VI.

Sixth Annual Report of the Managers of the State Lunatic Asylum, made to the Legislature (of New York,) February 1st. 1849. (From Dr. Brigham.)

Report of the Pennsylvania Hospital for the Insane for the year 1848. By THOMAS S. KIRKBRIDE, M. D., Physician to the Institution. Published by order of the Board of Managers. Philadelphia, 1849. (From the author.)

Report of the Eastern Asylum in the City of Williamsburgh, Virginia, 1848. Richmond: Printed by Shepherd and Colin. 1849. (From Dr. Galt.)

There is no member of the medical profession who deserves more thanks from the community at large, and gratitude from the afflicted, for his efforts in their behalf, than the physician who, for their good, submits to the confinement of a Lunatic Asylum. Here he is continually surrounded with the most ungovernable of all patients, and liable, at all times, to become the victim of some insane impulse. His ingenuity is taxed to the utmost to devise means of controlling this patient to prevent him from doing violence to himself—that, to guard him from homicidal impulses; or another from disturbing the whole household with his songs, his sermons, or his curses. Nor are his powers of governing the insane alone called into requisition, for he must necessarily have control of large numbers of subordinate officers, attendants, and servants who must all have their places and be required to fill them. Here he will continually meet with specimens of perversity to vex and harass him, and unless he be endowed with patience and an unusual amount of self control and equanimity of temper, he will often be thrown off his guard, lose his influence, have his disposition soured, and his happiness perverted. Nor is his prowess in government the only quality necessary in his disposition. He must, while governing, know how to submit to control. And happy will he be if, upon his board of managers there be found none but those who are willing to second all his laudable efforts to do good; nor those who will, with a limited knowledge presume to give directions contrary to his wishes which he knows will result in evil.

And again, the diseases of the brain and nervous system, are the most obscure and their manifestations or signs the most erratic of any other class of diseases; consequently requiring the closest observation and strongest powers of thought

correctly to apply the means of relief. Although the salaries of these officers are generally liberal, certainly no other motive than a sense of duty could induce a physician of proper qualifications to enter upon a post of such difficulties as those we have described.

The labors of Superintendents of Hospitals for the Insane have already done much for the relief of the lunatics in our own country. The prospects, however, are still brightening. We see, almost daily, improvements being suggested and introduced, the most important of which, of late, relate to the construction of suitable buildings, and especially to heating and ventilating them.

Among the most encouraging signs of improvement is the organization of the "Association of Superintendents of American Institutions for the Insane," which is to hold its next meeting on the 21st May, at Utica, New York, the site of the Institution from which the first report, at the head of this article was issued.

This is the most extensive establishment of the kind in the United States, having room for about 500 patients and the suit of officers, attendants, &c., necessary for their care and treatment. There were, at the date of this report, 495 patients in the establishment—241 men and 254 women. In the course of the year, 877 patients were in the asylum. Besides the five resident officers of the institution, there are 88 persons in its employ.

There were discharged during the year 174 patients cured, 84 improved, 38 unimproved, and 86 died.

Dysentery prevailed in the asylum and in several towns in its vicinity, extensively, during the months of August and September, having affected 240 of the patients and proving fatal to 36. This will account for the large mortality as stated above. In other respects it has been very prosperous.

The remarks, in this document, of Dr. Brigham, the distinguished superintendent of the institution, on the increase of

insanity, its causes, prevention, prognosis, medical and moral treatment, are highly judicious and interesting.

The second report at the head of our article presents many encouraging features.

There were in the Hospital at the date of the last report, 188 patients. There have been admitted, during the year, 215, making 403 in the institution during the year, of whom 203 have been discharged, leaving, at the date of this report, 200 in the Hospital. Those discharged were conditioned as follows:—cured 120; much improved, 23; improved, 24; stationery, 19, and 19 died.

The author of the report, who is the superintendent of the institution, is highly pleased with the plan of separate or detached cottages, which they have adopted for such patients as are suited for their occupation by wealth and disposition.

The last of these documents shows that at the commencement of the year, 164 patients were in the institution, 34 have been received during the year, 16 have been discharged, and 17 died.

Dr. Galt, author of the report and superintendent of the institution, gives a brief account of the condition of the household and takes up the consideration of the plans adopted for new buildings about to be erected for the accommodation of the convalescent and demented.

In speaking of the propriety of a detached building for those of the latter class, he says the objection on account of the liability of their being neglected, does not hold as strongly in the south as north, because the attendants have slaves to do the menial service connected with the care of patients. All classes of patients are admitted and treated in this institution including slaves and free persons of color. E.

ARTICLE VII:

Notes on the Medical Application of Electricity. By WILLIAM F. CHANNING, M. D. Boston: Published by Daniel Davis, Jr., and Joseph M. Wightman. 1849. pp. 100. (From Griggs, Bross, & Co., Chicago.)

This is a useful and interesting volume, devoted exclusively to the consideration of the medical properties of electricity; intended, as the author remarks, "to facilitate its application to disease."

The subject is treated under five heads, viz.:

1. Physiological Relations of Electricity.
2. Forms of Medical Electricity.
3. Means of Application.
4. General Application to Disease.
5. Special Application to Disease.

Speaking of its physiological relations, the author remarks that "the principle of vitality, in its highest signification, has hitherto escaped analysis. It is dependent, however, on physical conditions and performs its functions by the agency of physical forces." And again: "It is the product of physical organization and reacts with other physical principles."

We are aware that assertions identical with, or similar to, those just quoted are to be found in most if not all physiological works, but, as we think, without sufficient regard to their import.

If the principle of vitality has hitherto escaped analysis, what means have we of knowing that it is dependent on physical conditions, or that it performs its functions by the agency of physical forces? If the principle of vitality is the product of organization, as stated above, what acts upon inorganic matter to effect that organization? Those who thought-

lessly make such assertions, will most certainly be driven to the absurd and impious conclusion, that matter possesses the power of self organization.

We make these remarks, not with a view of condemning the writer of the above in particular, but in order to show that broad assertions with regard to subjects not yet sufficiently investigated to justify such sweeping conclusions, are too often made, and should, therefore, be discountenanced by all lovers of truth and friends to the advancement of science.

All that portion of the work which treats of the forms of electricity, means of application, etc., is highly instructive and furnishes to the profession, in a condensed form, all the useful information upon that subject.

The numerous cases given, illustrative of its beneficial effects in the various forms of diseases in which it has been used, are interesting, and furnish indubitable evidence of its utility, and the importance of determining more certainly in what forms of disease it proves most beneficial. H. M.

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Part 3.—Selections.

ARTICLE I.

Case of Pseudo-Membranous Laryngitis. By Dr. C. D. MEIGS.

A child, æt. four, becoming affected with difficult and noisy respiration, was placed under the care of a homœopathic practitioner; the parents having lost already a child from the croup, recognized in this the same symptoms as were observed in the former case, and suggested to the medical attendant that the child was laboring under that disease, but this he declared was not the case, but rather thought that the attack would turn out to be one of measles. The child, however, grew worse and worse; no eruption appeared upon the skin, and at the end of two weeks, the respiration having become increased in difficulty and attended with a distinct croupy sound, while the voice of the child was nearly extinct, the parents of the child became alarmed and sent for Dr. Meigs. His son, Dr. J. F. Meigs, immediately saw the patient and found it in an advanced stage of genuine membranous croup, attended with symptoms of the most violent character; an extensive deposit of membranous matter appeared to have taken place, and the case was looked upon as almost hopeless. With the view, however, of affording, if possible, some relief to the extreme difficulty of breathing, the doctor directed the application of five or six leeches to the throat on each side of the trachea. Dr. C. D. Meigs now saw the child, and considered it to be in the most imminent danger. The croupal symptoms were intense. Upon auscultation, not the slightest respiratory murmur could be detected in any part of the chest, giving the idea of an individual laboring under complete hepatization of both lungs. The air passed into the lungs with the greatest difficulty, the respiratory effort being prolonged to an extent beyond what the doctor recollects to have ever before witnessed. The child was extremely restless, its head was thrown back upon the spine, and every moment strangulation seemed imminent. A half-ounce of powdered alum was directed, and one drachm given to the child at intervals of twenty minutes, until emesis was produced, which did not occur until after the fourth dose. This was rather an uncommon occurrence, vomiting being

generally produced by a single dose of alum; it evidently indicated a torpid state of the nervous mass, the result of the great change produced in the blood, in consequence of the imperfect performance of the respiratory function. No nausea or prostration followed the action of the emetic.

Early the next morning, found the child laboring under the most distressing difficulty of respiration. The surface, and particularly the face, lips, and tongue, were of a blue color, and nearly all the symptoms of asphyxia were present. Dr. Meigs considered that death was inevitable, but still the operation of tracheotomy, though a forlorn hope, presented itself as the only possible means of relief. This was stated to the parents, who consented that it should be tried. Accordingly at 11 o'clock the operation was performed by Dr. Pancoast. After laying bare the trachea, he divided the second, third and fourth cartilaginous rings; immediately upon opening the trachea, a discharge took place of mucus, mixed with blood and portions of plastic lymph. In forty seconds, the child breathed with great freedom. Instead of inserting a tube in the usual manner through the opening into the trachea, Dr. Pancoast secured the open state of this by cutting from the trachea an elliptical portion of cartilage, thus leaving an oval opening into the tube, somewhat larger than that of the two nostrils; while the edges of the incision through the soft parts were kept asunder by a leaden wire, which, passing around the neck, had the hooked ends of its two free extremities inserted on each side of the wound. The next day the child was up and running about. In a few days the edges of the incision in the neck were brought together, the wound rapidly healed, and the child within a suprisingly short period, recovered perfectly without a single disagreeable symptom occurring.—*Transact. Philad. College of Physicians, 1848.*

ARTICLE II.

Twins locked in each other. By Prof. MURPHY.—(Med. Gaz.)

A complication of a singular character has been recorded in which delivery was rendered extremely difficult. The late Dr. T. Ferguson, of Dublin, relates a case of twins in which the first child presented the foot, and was delivered without any unusual obstacle in the progress of the labor until the child's body was so far protruded as to enable Dr. Ferguson to ascertain, by the pulsation of the funis, then without the os externum, that the child was alive. From this stage of the delivery he began to experience a most unusual and unaccountable resistance to the further descent of the child. This difficulty was produced by the head of the second child descending before the head of the first, so that each locked in the other. The pulsation in the funis of the first child still continuing, Dr. Ferguson wished to perforate the head of the second, that caused the obstruction: there was some delay in obtaining instruments; and in the interval, the pulsation of the first child ceased; but, to the surprise of Dr. Ferguson, powerful expulsive pains forced down the heads of both over the perineum, and the second child was born living! Two years ago Mr. Elton, of Windsor, related a similar case. The feet of the first child presented, and were brought down, but, "after the thighs had passed, the delivery became slow and increasingly difficult; the abdomen suffered great compression in passing; the thorax still more; the difficulty became greater with the further progress of the body; the arms were extracted with much trouble, and, it then being practicable, an examination was made. I found the vertex of a full-sized head presenting immediately over the breast in the position where there should have been a chin; the anterior base of the neck could be traced in close and compressed contact with the presenting head, the latter firmly impacted in the pelvic cavity." Mr. Elton divided the neck of the first child; and, having removed the truncated body, applied the forceps to the second child, which he delivered, but could not save, although attempts "to restore animation were long and anxiously continued." What is to be done in such a case as this? I certainly should not be disposed to destroy either child. Before I took up the perforator or the amputating knife, I should weigh well the practicability of applying the long for-

ceps to the head of the second child, and endeavor to imitate nature in the effort to force both heads over the perineum. If you succeeded, its laceration might be the consequence; but it would be some recompense to save a life that otherwise you must destroy."—*N. Y. Jour. of Med.*

ARTICLE III.

On Severe Cold or Congelation as a Remedy of Disease. By JAMES ARNOTT, M.D.

Many powerful physical agents which are destructive when they act in an uncontrolled manner on the human body, become remedial when their action is regulated and applied under appropriate circumstances. Excessive heat, which when extensively applied to the body, is immediately destructive of life, may be so limited or controlled, even when it is of so high a degree as to render iron white, as to furnish a useful therapeutical means; and the opposite extreme of temperature, or a degree of cold causing congelation of the animal textures, which has hitherto been only regarded as the cause of disease, when it is not too low, too extensive, or too much prolonged, constitutes, as will appear by the following observations, a remedy of great importance, and of very general application.

Intense cold or congelation would probably, long ere now, have obtained a place amongst the more potent therapeutical means, but for a mistaken notion respecting its effects on the animal structure. It has been always dreaded as a cause either of violent reaction and inflammation, or, if longer continued, of the immediate gangrene or death of the part subjected to it; and the common accidents from intense frosts in severe winters and high latitudes, have appeared to justify this apprehension. But, although it is perfectly true that the body thus exposed to intense heat, or is burned by accidental fires, yet when severe cold is regulated as has been just described, it becomes an agent of a very different character: it produces neither reaction nor mortification. When limited in degree, duration, and extent, it exerts an anti-inflamma-

tory power; it appears to depress the vascular and nervous energies permanently, and yet within the bounds of safety; and, probably, while it depresses, it considerably modifies the vital action.

I was led to doubt the correctness of the common opinion of the effects of congelation, by observing that when intense cold had been used to remove the sensibility of parts previously to surgical operations, the wound appeared, in every instance, to heal more rapidly than under the usual circumstances; and I had no hesitation in endeavoring to extend the useful application of so valuable a remedy.

As it is my only wish at present to establish the right of congelation to be admitted amongst our more valuable remedies, I will not enter into details respecting the diseases in which I have had recourse to it. If the above explanation of its action be correct, it is obviously applicable to a great number of the more formidable maladies to which the human frame is subject. As respects its anæsthetic action on the nerves, it exerts a most beneficial influence in many painful diseases, the seat of which can be reached by it; but it is probably as a preventive and prompt remedy of vascular excitement or inflammation, that it will be chiefly valued. Cold has already a high character as a remedy for inflammation; but a continuous low degree of cold, such as has hitherto been employed, (or rather which it has been the endeavor to employ,) may only repress the morbid energy, which a short application of a much greater degree of cold, may altogether and at once destroy. A class of diseases in which both nerves and blood-vessels are in a morbid condition, are affections of the skin, and these were, naturally, from being so obviously under the influence of the new remedy, amongst the first in which it was used. The most obstinate cutaneous diseases have yielded to congelation so speedily as almost, with respect at least to some of them, to suggest another explanation of its *modus operandi*. Had the cases of prurigo so treated been dependent, like scabies, upon the presence of parasitic animals, they could not have been more speedily cured by the sudden extinction of the life of these animals in the cold. A most distressing attack of prurigo pudendi was completely cured by two congelations, each of about thirty seconds duration, after a prussic acid lotion, and other routine applications, had been tried in vain.

Congelation to the degree which has been specified may be produced by the common frigorific mixture of ice and salt;

though for particular purposes, one of greater power might be prepared. The easiest mode of using the frigorific is, to dip a piece of ice into salt, and then apply it closely to the part. Congelation will be thus produced in half a minute. When the surface to be frozen is irregular, a little pounded ice and salt may be placed on a rag or on a flat bit of sponge, or the mixture may be confined to the part by a deep ring or a bottomless cup, made of gutta percha or bees-wax, or by means of a thin bladder, each being provided with a small tube carry off the warmer brine as the ice dissolves. The application of ice or very cold water to the skin is painful, but the frigorific mixture immediately suspends the sensibility.

It has been applied to a carious tooth, an inflamed and ulcerated mouth from mercurial ptyalism, and an irritable ulcer, without causing uneasiness; but when the congelation commences, there is, for a few seconds, an uneasy sensation of contraction, proportionate to its degree. In the case of ptyalism referred to, (a patient of the Brighton Dispensary, who had been deprived of sleep for two nights by the affection of the mouth,) there was no return of pain, except in mastication, after one application of the frigorific, which was sufficiently powerful to blanch the lower lip as it flowed over it.

As the prevalent erroneous notion, that congelation of the animal textures, must, in every instance, produce either violent reaction or gangrene, will probably prove some impediment to the reception of this important therapeutic agent, it may be well to remind such as may object to it on this account, of the vast difference between intense cold, acting for a long period on the extreme parts of the body where the circulation of the blood is never vigorous, and ready to reanimate the parts in which it has ceased. There is as great a difference between these cases as would exist between that of opium taken in unlimited quantity by a feeble child, and taken in a suitable dose by an adult. I have now employed congelation nearly a hundred times for anæsthetic and remedial purposes, without its being followed in a single instance by any injurious effect. Even if the congelation be kept up for several minutes there is no worse consequences than slight congestion, with redness of a few days continuance.

As respects the employment of severe cold for the production of local anæsthesia, it may be remarked, that although a fatal result now and then from the use of chloroform may not be thought to be, by the great mass of physicians, a suffi-

cient objection to its use, and although the intoxication or loss of consciousness during its action may be only deemed a slight inconvenience, still the facilitating of the healing process, by the prevention of an injurious degree of inflammation ought, I think, to entitle the application of cold to the preference in the great majority of surgical operations.

ARTICLE IV.—*Treatment of Malignant Cholera.*

The following comparison of various modes of treating malignant cholera, is taken from a review of several recent writings on this disease in the Monthly Journal, 1849:—

Blood-letting.—In reference to this, the evidence is conflicting. It has been employed with alleged benefit in all stages of the disease in this country and in India. In the early stage it has been effectual in relieving the feeling of oppression on the chest. Its effects on the mortality is not evident. Dr. Robertson, in his statistical account of the cholera in Edinburgh, during the present epidemic, states that he has in many instances prevented collapse by this measure.

Stimulants.—According to M. Ross' tables, stimulants given to any extent, appear to have been injurious.

Opium.—There seems no reason to doubt its efficacy in the early stage, but according to the tables above mentioned, it does not diminish the mortality.

Mercury has not been followed by remarkable success, in this country, except in the hands of Drs. Ayres and Peacock, both of whom use it without stimulants. In their experience the mortality was reduced to thirty-one per cent. Dr. Fleming advises the use of a solution of the bichloride, as more readily absorbed.

Tartar Emetic in small doses, with cold water, ad libitum, has, in the Droitwich Asylum, afforded the largest per centage of cures, the deaths being only four in twenty-four cases.

Injections into the Veins has afforded no satisfactory results.

Chloroform has been used by inhalation in thirty-seven cases. The results are inferior to those witnessed in the Droitwich Asylum, but superior to the general results exhibited in Ross' tables.

ARTICLE V.—*Treatment of Cholera.*

Dr. Maxwell of Calcutta, who has lately published a "Key to Cholera," (he himself having had three attacks of the disease,) thus alludes to his recovery from the last attack. Our quotation commences after his description of the occurrence of the characteristic spasms.

"The thirst, however, became worse and worse, and I determined to relieve it at all hazards, and not add misery to death. Having made up my mind, the next point was to choose the particular beverage; there was plain water, whey and barley-water, gruel, congee, &c., wine and water, brandy and water, &c. To the last of these I had a repugnance, as every one has in full formed Cholera, and the others would require time and direction for their preparation, which my disease was not able to afford, or I to give. Whilst thus ruminating, my eye accidentally fell upon a packet of effervescing soda powders standing among a crowd of other remedies and nostrums on the table. It immediately struck my fancy; it struck me as the very thing I wanted, and without further delay, I pointed to it, and made signs for a copious draught thereof. It was soon made, and soon swallowed; it was extremely refreshing and agreeable, and the thirst was allayed; no nausea succeeded, and the pleasing anticipation remained of having a repetition of the draught whenever I desired. This I was not long in desiring; in fact, almost immediately afterwards I swallowed another, and continued repeating it whenever the thirst became urgent. Instead of retrograding or remaining stationary, I began to improve; the stools became easier, and the spasms less vigorous and vicious.

I experienced an inclination to sleep, a desire to be covered up, and for something hot to drink—(these are the best signs, as they point out the disease escaping from the collapse stage). I had a large tumblerfull of warm but very weak brandy and water made, and drank it off. I fell asleep, and had five or six hours sound repose. I awoke bathed in perspiration, and with the exception of a little stiffness and considerable thirst, I felt perfectly well. The thirst was again relieved by the effervescing draughts and I followed up the principle with a couple of dishes of that most delectable and pre-eminent of all stomachics, tea."—*Medical Times in N. J. Med. Rep.*

ARTICLE VI.—The use of Ergot in Post-Partum Hemorrhage.

We have mentioned the administration of ergot of rye as a preventive of post-partum hemorrhage; and in the hospital we have seen such decidedly favorable results from its use, when employed for this purpose, as to have no hesitation in pronouncing the practice to be both safe and efficient. With this intention it may be given at one or other of three periods: namely, when the head of the child is on the perineum, and about to be expelled; or immediately after the head has cleared the os externum, and before the shoulders have passed; or, thirdly, so soon as the insertion of the cord into the placenta can be felt. "By giving ergot before the child has been expelled, some time may be gained; but should the placenta be morbidly adhering to the uterus, the difficulty of introducing the hand for its removal will be greatly increased. By adopting the third plan, this source of apprehension is avoided. To this method it may be objected that much time will, perhaps, elapse, and a considerable quantity of blood be lost, before the ergot is administered; nevertheless, the possibility of the placenta being morbidly adherent, should be ever present in the mind of the practitioner, and deter him from resorting to a measure which may so greatly augment the danger of the complication." Dr. Johnson, who introduced the practice into this hospital, generally gives the ergot according to the mode last recommended. In certain instances, however, where from previous losses it was a matter of the utmost importance to prevent any further hemorrhage after delivery, we have not scrupled to administer it in the second way spoken of above, and hitherto without any unpleasant effect. Here, as on every other occasion, we should be careful to use ergot of undoubted genuine quality, for otherwise its exhibition can be productive of no good, and will only cause disappointment. Few medicines so readily spoil, or are to be found of such variable quality; and this circumstance goes far, we think, to reconcile the conflicting opinions which have been entertained respecting its properties and doses.—*M'Clintock and Hardy's Practical Observations*, pp. 220 and 221, *Ibid.*

ARTICLE VII.—*Accidental Expulsion of a Child without its experiencing any injury from the fall.*

A woman of short stature, 34 years of age, strongly built, gave birth to a child in ordinary labor one year after marriage. On the 10th of July, being near the end of her second pregnancy, the period of gestation was accidentally terminated. She was engaged in a violent dispute with her husband, which was nearly coming to blows: she abruptly rushed into an adjoining room, and was in the act of sitting on the bed, when suddenly strong labor came on. Before she could reach the door and call for help, the pains became so severe that she was obliged to lean for support against a chair; at the same moment the child fell suddenly to the ground, without being in the least injured. On his visit, Dr. Pickford found not even a bruise on the vertex, on which the child had fallen. The placenta was expelled as he entered, and it showed that the cord had been ruptured at the distance of two inches from the umbilicus. The child was strong and fully developed.—*Dr. Pickford, in Henle's Zeitschrift für rationelle Medizin, vol. vii., part i., p. 25, in Ibid.*

ARTICLE VIII.—*New Remedy for Tooth-Ache.*

Mr. James Beatson, of Airdrie, says: Gum copal when dissolved in chloroform, forms an excellent compound for stuffing the holes of decayed teeth. I have used it very frequently within the last two weeks, and the benefit which my patients have derived from it has been truly astonishing. The application is simple and easy. I clean out the hole, and moisten a little cotton with the solution; I introduce this into the decayed part, and in every instance, the relief has been almost instantaneous. The chloroform removes the pain, and the gum copal resists the action of the saliva, and as the application is so agreeable, those who may labor under this dreadful malady would do well to make trial of it.—*Med. Times in Jour. Dent. Sci.*

ARTICLE IX.—*Contagion of Cholera.*

The following instance is quoted as an example of the propagation of cholera by contagion. "The British frigate, 'Topaz,' touched at the Isle of France in 1829, and conveyed thither cholera, which spread rapidly throughout the island, prolonging its ravages for four months, sparing neither age, sex, nor rank, although the deaths were more numerous among the black population. No room was left for doubt that the disease had, in this instance propagated itself directly by contagion. Six thousand individuals perished during the first six weeks of its appearance. When this ship arrived, the Island was in a healthy state, and had been free from any epidemic illness for an unusually long period." *Dub. Med. Press. in Med. News.*

ARTICLE X.—*Cod-Liver Oil.*

A discussion on the properties of this article took place at the Westminster Medical Society, February 3. The majority of the fellows stated that they had found the oil to possess a very marked effect in almost all cases of scrofula and phthisis. In the first class of cases, it was not only given internally, with the effect of much improving the general health, but it was applied locally to scrofulous sores, with the most marked benefit. In phthisis it appeared to exert its influence at once by its nutritious properties. It checked perspiration, and removed emaciation; and appeared, by keeping up the tone of the system, to arrest the further deposition of tubercular matter. Some thought that any oily substance, as butter or almond oil, would have the same effect; others considered the cod-liver oil to have some specific influence. One gentleman had found it rather injurious than otherwise in some cases of phthisis, from its tendency to disorder the digestive organs. Altogether, however, the opinion generally was decidedly in its favor as a palliative agent in consumption.—*Lancet in Med. News.*

Part 4.—Editorials.

ARTICLE I.

RETROSPECTIVE ABSTRACT OF THE JOURNAL.

The last number closed the first volume of the North-Western Medical and Surgical Journal, being the fifth volume since the work was commenced under another title, by Prof. Blaney.

After closing the volume, we look back over the labors of the year, satisfied that we have made some improvement in the work, though it falls far short of what we could desire, and of what we intend it to be, hereafter, if unwearied application on our part, availing ourselves of the best sources of information, and of the contributions of the best physicians in the country, will make it better.

We must award to our numerous contributors our best thanks, for the ability and liberality with which they have assisted us in our labors; enabling us to present as great a variety of original matter, as any of our cotemporaries, who have testified to the merits of many of the articles by transferring them to their own papers.

By way of review of the original department of the volume, we will proceed to give a brief notice of the several communications in the order of their appearance.

No. I. ARTICLE 1.—*Inflammation of the Vena Porta.*—Translated from the German of Waller, by Dr. D. Stahl, of Quincy, Illinois.

In directing the attention of the profession to a pathological condition of grave importance, which might be expected here in the west, where abdominal diseases are common, Dr. Stahl

has rendered essential service by the translation of this excellent article.

Investigations should be instituted to ascertain the extent of this malady by post mortem evidence. The vena porta is seldom examined.

ARTICLE 2.—*Intestinal Worms—Thier Effects, &c., in the Adult.*—By W. Matthews, M. D., of Eberle, Indiana.

This article points out the obscurity of the symptoms of invagination, showing that diseases dependent upon it are frequently unsuccessfully treated as idiopathic affections.

The production of worms in the hog by eating acorns, in the case referred to, corroborates the well established doctrine of indigestible food being a cause of worms, and may furnish a hint to farmers. The cases reported are interesting and show the importance of a thorough acquaintance with general pathology in the practice of medicine, to enable the physician to steer clear of blunders in diagnosis, and consequently in treatment.

ARTICLE 3.—*Retroversion and Antiversion of the Uterus.*

Being by the writer, this article will not receive further notice here.

No. II. ARTICLE 1.—*Purulent Ophthalmia.*—By E. G. MEEK, M. D., of Indianapolis, Indiana.

This article is highly interesting as corroborating the importance of an early resort to the application of Nitras Argenti, in strong solution, to the conjunctiva, in purulent ophthalmia, and has also a bearing upon the question of its applicability in inflammation of other mucous surfaces which is attracting the attention of the profession generally at this time. The author thinks there can be little doubt of the contagious nature of the disease. It is written in a clear, familiar, and interesting style. It was republished in the Medical Examiner.

ARTICLE 2.—*Medical Literature.* By Prof. FITCH.

The object of this article is to put the profession on the alert in reference to mere assertions and opinions, and to no-

tice the false colouring frequently given by authors to their facts by partial statements and sophistical deductions. It gives a judicious statement of the responsibilities of authors and reviewers in reference to these matters.

ARTICLE 3.—*Old Dislocation of the Humerus.* By H. S. HUBER, M. D., of Chicago.

This was a dislocation downward and forward of thirty-three days standing, which was reduced by the use of the ordinary means except that a twisted rope was used instead of a Pulley.

The favorable result is attributed to the care observed in making the extension, and to the scapula being confined to prevent its being drawn from the body, which the author thinks would endanger the artery by its tension. There is, doubtless, value in the suggestion, but that an adhesion between the humerus and artery would not effect a rupture of the latter under even this care, is by no means probable.

ARTICLE 4.—*A Case of Purpura Hemorrhagica* By W. WADSWORTH, M. D., of Racine, Wisconsin.

This case is valuable as showing the beneficial influence of Spirits Terebinth. ; but by no means proves that this will be a specific in hemorrhage as has been suggested by some. That its peculiar stimulant effects are beneficial in the disease in question we have no doubt. The article has been copied by one or two of our exchanges.

ARTICLE 5.—*Death by Vaccination.* By Dr. GREGG, of Rock Island, Illinois.

That erysipelas should follow vaccination is not remarkable, since it sometimes is observed to follow the slightest injuries, but here we have a good cause for the character of the disease in question, as there can be little doubt of the contagion having been contracted previously. It has been copied and noticed, by most of our exchanges.

ARTICLE 6.—*Treatment of Hydrocele.* By L. DUNLAP, M. D., of Indianapolis.

After a brief statement of a few of the authorities in favor of the modes of treatment by injection and incision the author decides in favor of the latter. He advises that the tent inserted be made of a piece of narrow silk ribbon. He thinks the danger of violent inflammation not so great in malarious districts of country.

Prof. Dudley, of Kentucky, has long pursued a practice similar to that recommended, i. e. in the use of the tent.

ARTICLE 7.—Case of Abnormal position of the Intestines, in the opposite side of the Body. Translated from the German of Wolshoffer, by Dr. STAHL, of Quincy, Illinois.

This, and the case of Mr. Whitman referred to, are not only interesting as showing the freaks of nature, but they put us on the look out for such cases in examining for diseases of these organs.

ARTICLE 8—Observations on Cholera Infantum. By J. H. McNUTT, M. D., of Annapolis, Indiana.

This is an excellent article and makes many valuable practical suggestions in reference to the treatment of this fatal malady. The experience of the author confirms the utility of the following proscription:

R.—Rad Rheii (burnt);

Loaf Sugar, a 3ji;

Water, f3vii.

Boil for a few moments and strain, to each ounce of the decoction add Bicarb. Soda, grs. v. Dose, a teaspoonful given three or four times daily.

The suggestion that physicians should be careful not to attribute green-colored discharges to hepatic derangement, and make it an indication for the use of calomel, is a good one, and ought to be more generally heeded.

ARTICLE 9.—Proceedings of Medical Societies.

Among the most encouraging signs of the times is the disposition we find in the profession to organize. It is the true

policy. Argeeably to De Tocqueville, this is the great feature of American policy upon which success depends.

Organize brethren; write papers and read them to your meetings, giving the results of your observations, taking care to investigate thoroughly the subject upon which you write, and you cannot fail to improve. Then when you have read an article that will instruct the members of your associations, remember it may do good if published and send it in.

No. III. ARTICLE 1.—*Case of un-united fracture of the Femur, of one years standing, successfully treated by Re-section Denudation, and retaining the ends of bone, by means of wire* By Prof. BRAINARD.

This class of cases has heretofore been treated by amputation, as may be seen by reference to the description. The plan of treatment pursued is original, ingenious, and admirably adapted to fill the indications. The article was copied by the American Journal of Medical Science, in the same number of which is the report of a very similar case treated by one of our most eminent surgeons, which resulted in amputation.

ARTICLE 2.—*Old Dislocation of the Humerus, mistaken for recent injury and consequent failure of the attempt to reduce.* By H. ROSENKRANS, M. D., of Ottawa, Illinois.

Mistakes of this kind when reported have a valuable influence in showing how like errors may be avoided. Physicians are too backward in reporting their failures. A thorough examination of the case no doubt would have revealed its nature; but who when called to a case of dislocation of the shoulder, stops to make a critical examination before attempting a reduction?

ARTICLE 3.—*Strictures on the use of Ergot as a Parturient Agent.* By JNO. H. SANDERS, M. D., of Indianapolis, Ind.

The author condemns, in unqualified terms the use of ergot as an aid in effecting delivery in parturition.

The objections urged are, 1st, the difficulty of determining the cause of obstruction to labor; 2d, the great suffering su-

perinduced; 3d, the contractions induced by it are more like spasms than expulsive efforts; 4th, the great liability of its inducing uterine inflammation; 5th, it frequently causes the death of the child; 6th, liability of injuring the vagina; 7th, a morbid sensibility induced by it; 8th, healthy secretions interrupted by its influence; 9th protracted recovery often follows; 10th, liable to be used, when not necessary, to save time. He has practiced twenty years without finding its use necessary.

Although some of the objections are not very forcible, there are many points presented, bearing strongly against a general use of the article. The influence of the paper upon the profession will be good, if it checks the practice of resorting to the use of ergot unnecessarily to hasten delivery.

ARTICLE 4.—*Observations upon Abdominal Movements as connected with Pregnancy.* By JNO. E. MCGINN, M. D., of Chicago.

Two cases are reported which show the uncertainty of movements of the abdomen, as a symptom of pregnancy and the author is strong in his praise of the stethoscope as a means of diagnosis in pregnancy.

ARTICLE 5.—*Adipose Tumors.* By JNO. T. PLUMMER, M. D., of Richmond Indiana.

The author's labors in the field of natural science have secured him a high and deserved reputation. The article is interesting and gives some valuable facts bearing upon the nature and pathology of tumors.

ARTICLE 6.—*Singular Case of Uterine Fleshy Mole.* By R. R. STONE, M. D., of Dorr, Illinois.

This is a remarkable case and presents some features of difficult explanation. It has been copied into several of our exchanges.

No. IV. ARTICLE 1.—*Medical Topography of Greencastle, Indiana, and Vicinity.* By R. CURRAN, M. D.

This is a well written statement of the facts, the title purports to give, with philosophical deductions from them, and

would triumphantly refute the charge, if made, that Green-castle is an unhealthy situation. As our readers are many of them so situated that opinions may be asked by parents in reference to sending their sons to the University there, the information given here will be of particular utility, and enable them to speak understandingly on the subject.

ARTICLE 2.—*Hernia Cerebri*. By G. W. MEARS, M. D.

This is an account of a disease of rather rare occurrence, upon which but little has been written. The case reported, and the practical suggestions, are instructive and interesting.

ARTICLE 3.—*Abdominal Movements in reference to Pregnancy—their Nature and Cause*. By JNO. E. MCGILL, A. M., M. D., etc.

This article is a continuation of the subject from an article already noticed. The conclusion that the child is not the cause of the motions generally attributed to it, we think a mistake; yet they are liable to be simulated, and the accoucheur should be on his guard and not place too much reliance upon them. A case came under our observation, in which the patient supposed herself in the fifteenth month of gestation. The motions were so strong that the patient could scarcely sleep at night, and, upon placing the hand upon the scrobiculis cordis, became most violent. It was found that the motions were spasmodic contractions of the diaphragm, partly, at least, under the control of the will.

ARTICLE 4.—*A case of Cerebral Abscess*. By THOS. HALL, M. D., of Toulon, Ill.

This is an interesting case, showing the correctness of symptoms in making out a diagnosis which was confirmed by post mortem demonstration. The members of the profession generally neglect to qualify themselves from making these examinations, which is a great defect in their education, for they should at all times be ready to investigate the post mortem evidences of their correctness or error in diagnosis. By the way a correction has been made by Dr. Hall in the account of the paralysis, it being on the opposite side from the abscess,

as is usually the case, instead of the corresponding side, as reported.

ARTICLE 5.—*Posoning by Coccus Indicus.* By H. ROSENKRANS, M. D., of Ottawa.

This shows the danger to the human constitution of an article generally regarded as poisonous of the effects of which but little is known. The rapidity with which it proved fatal shows its virulence. The article has been copied by most of our exchanges.

ARTICLE 6.—*New Treatment of some cases of Placenta Prævia.* By H. S. HUBER, M. D., of Chicago.

Primal pressure has long been known to excite uterine contractions to some extent, but we rely but little upon it in a case demanding such active treatment as placenta prævia generally does. It, however, can be resorted to while other means of treatment are applied, and might be valuable if Dr. Simpson's plan of separating the placenta from its attachment to the uterus had been resorted to.

ARTICLE 7.—*A case of Neuralgia.* By J. GEORGE OSBORNE, M. D., of Tippecanoe county, Indiana.

Tobacco is powerfully narcotic, and is manifestly capable of producing nervous derangement; but as causing neuralgia it is but little known. This is a highly interesting case, and has been copied by a number of our exchanges.

No. V. **ARTICLE 1.**—*Sanguinaria Canadensis as a Therapeutic Agent.* By J. L. MOTHERSHEAD, M. D., of Indianapolis Indiana.

Although, in the cases reported, in this article, the symptoms are not described as fully as could be desired, valuable practical facts are given showing the use of blood root, especially in dyspepsia.

ARTICLE 2.—*Remarks on Puerperal Fever complicated with Malaria.* By E. R. PARKS, M. D.

This article calls the attention of the profession to a diseased condition of the puerperal state, which most of our

readers will remember to have met with, and many of them often, that has heretofore, so far as we recollect to have seen, not been fully described. It is a valuable contribution to our western medical literature.

ARTICLE 3.—*Rheumatic Affections of the Stomach.* By R. R. STONE, M. D., of Solon, Illinois.

This is a sensible article, and makes a valuable practical suggestion in reference to the use of colchicum in the chronic pains "in the sides and shoulders so often complained of in this latitude."

ARTICLE 4.—*Autopsy of a case of Abscess of the Liver.* By H. ROSENKRANS, M. D., of Ottawa, Illinois.

Excepting the encouragement to the practice of making post mortem examinations, this case seems to possess but little interest. It shows the oft proven fact that abscess of the liver is liable to discharge through the lungs.

ARTICLE 5.—*Diseases of the West—their complications, etc* By W. MATHEWS, M. D., of Eberle, Indiana.

This article is a contribution to our stock of facts on "sectional medicine," and shows that the treatment, of some cases at least, of inflammation should be varied from the general rules laid down for its management. It is also shown that some practical knowledge of western peculiarities is required to detect the complication.

ARTICLE 6.—*A case of Strangulated Hernia mistaken for bilious colic by a Thompsonian—consequent death.* By R. HORSLEY, Medical Student.

This is another instance of the fatal consequences that are continually resulting from the lamentable ignorance of quacks.

ARTICLE 7.—*Report of a case of Inflammation of the Fauces—closure—tracheotomy—recovery.* By J. B. HERRICK, M. D. Demonstrator of Anatomy in Rush Medical College.

This is a well reported case and shows the entire safety of the operation of tracheotomy when skilfully performed. It has been copied by one or two of our cotemporaries.

ARTICLE 8.—*Polypus Uteri*. By Dr. R. C. HAMILL, of Bloomington, Indiana.

This is a well reported case, treated successfully by ligation.

ARTICLE 9.—*Letter from Willis G. Edwards, M. D., to Dr. Brainard*.

This letter gives an interesting account of the surgery of the hospitals of Paris, after the bloody battles of last June.

ARTICLE 10.—*Iodine an Antidote to the bite of the Rattle Snake*. By J. WHITMIER, M. D., of Metamora, Illinois.

This is an original suggestion and, from the recommendation of the author, deserves further trial. It has been copied or noticed by most of our exchanges.

No. VI. ARTICLE I.—*Case of Malignant Pneumonia, with Remarks*. By EDWARD R. PARKS M. D., of Indiana.

The cases of disease reported, and the treatment pursued, illustrate the necessity of guarding well against the endemic influence by which the diseases of the Western country are modified, and show the fatal consequences of an ignorance of them. To the practitioners in the west this is a most valuable document.

ARTICLE 2.—*Remedy for Deafness in cases of Destruction of the Tympanum and small bones of the Ear*. By C. BRACKETT, M. D., of Rochester, Indiana.

That a piece of moist cotton should act as a substitute for the membrana tympani, seems to point to the possibility of introducing a substance that will answer the purpose permanently. Dr. B. deserves credit for the suggestion.

ARTICLE 3.—*A case of Malformation of the Heart*. By J. JACKSON, M. D. of Goshen, Indiana.

Many cases die of imperfect respiration, some at an early age, others at a later period, but that a simple opening in the foramen ovale would cause death without some other disturbance in the equilibrium between the pulmonary and general circulations, we much doubt. This case is of interest as bearing upon this point. A difficulty in respiration will pre-

vent the closure of the foramen; but a want of closure of the foramen ovale will not produce a difficulty in respiration.

ARTICLE 4.—*Remarks on Belladonna as an Application to Ulcers.* By E. S. COOPER, M. D., of Peoria, Illinois.

The cases referred to here are amongst the most perplexing met with, and the use of an article that promises to cure readily, and relieve from suffering speedily, is valuable. The use of the Belladonna has not been adopted as extensively as it deserves.

ARTICLE 5.—*Influence of Disordered Functions of the Skin in producing Fever.* By J. JACKSON, M. D.

This theory of fever is becoming quite popular and, to say the least of it, quite as likely to prove true as the doctrine of the cryptogamous origin.

The suppression of the perspiration is the arrest of an emunctorial process, which would be expected to produce constitutional derangements.

ARTICLE 6.—*History of a case of Spinal Disease.* By Dr. M. F. IRWIN, of Chrystal Lake, Illinois.

The report of unusual cases, especially when accompanied with full accounts of symptoms and autopsies are valuable contributions to our stock of knowledge of disease.

ARTICLE 7.—*Address to the Graduating class of Rush Medical college.* By D. BRAINARD, M. D., Pres't of the College.

This address is marked by the vigorous style and thought of the author, and presents the claims of our profession in such light that they can but be respected.

ARTICLE 8.—*Treatment of Spina Bifidia by Injections of Tr Iodine.* By Prof. BRAINARD.

This treatment, originally suggested by the author, and its application to large suppurating cavities, is likely to prove a most important discovery in Surgery.

The grateful acknowledgements of ourselves and readers are due to our contributors for articles many of which have uncommon merit. We hope that they will continue to labor with us in the field of science. E.

ARTICLE II.

We send to our subscribers, with this number a statement of their accounts, *advance payment* included for the volume commencing with this number. We hope our bills will be met promptly, as we need the money to "pay the printer."

ARTICLE III.

STATISTICS OF MEDICAL SCHOOLS, SESSIONS 1848-9.

We have collected from various sources all the reliable information at our command upon the subject into the following table. Of many of the schools we have no positive information, but believe the aggregate will show quite a falling off from the preceding Sessions in the number of Students.

Colleges.	No. of Students.	Graduates
College of Physicians and Surg. N. York.	176	39
University of Maryland.	190	63
Albany Medical College.	101	
Medical College of Ohio.	175	
Transylvania University, Lexington Ky.	120	49
Mass. Med. Col. Boston.		25
Starling Med. College.	173	50
University of the City of N. Y.		134
Geneva Med. College.		
Rush Med. College.	100	20
Med. Col. of Georgia.	133	36
Jefferson Med. Col. Phila.		188
Cleveland Med. Col.	251	
University of Louisville.	331	81
University of the State of Missouri.	154	

ARTICLE IV.

EDITORIAL DEPARTMENT.

We have associated with us as one of the Editors of the Journal, Edwin G. Meek M. D., of Indianapolis Ind., who has been known to our readers for some time by his contributions to our pages.

ARTICLE V:

NEW METHOD OF EXPELLING FOREIGN BODIES.

Dr. Charles Hansford, of Kncxville, in this State, gives us the following history of a case, illustrative of the efficiency of a new method of expelling foreign substances from the larynx.

A colored girl had accidentally got a pin into the windpipe and was suffering with all the distressing symptoms consequent upon obstruction of the air passages from a foreign body.

She was directed to lie upon a bench, face downwards with the head projecting over the edge, and to take a full inspiration.

Whilst in this position, with the lungs filled with air, a smart blow or two on the back with a pillow, made hard and firm by compression, had the effect to expel the pin at once from the larynx. In this case, the first blow moved the pin about an inch, the second forced it into the mouth.

"Since that time," says our correspondent, "I have had several opportunities of trying the maul made of a pillow. I have driven out water-melon seeds in this manner, on three different occasions; a grain of corn at one time, and a large glass bead at another."

The treatment recommended above is ingenious and simple, and, as it seems to us, is worthy of being tried in cases like those cited above.

H.

ARTICLE VI.

MISCELLANEOUS MEDICAL INTELLIGENCE.

Dr. J. Blount of Lockport asks:—If it is generally known that unguentum hydrargyri, can be made with a mere tithe of the labor that is usually given to it, and says, "I prepare it by substituting spermaciti for axunge.

"Rub the hyd. with the spermaciti a few minutes, add a few drops of sweet oil, stir a *minute* and you have a good hard neat wax, in the place of the soft offensive article formerly used."

We hear that a State Medical Convention is to meet at Indianapolis, by the call of the Indianapolis Medical Society about the first of June next, but cannot learn the day appointed.

Dr. DRAKE, than whom few men enjoy a higher reputation for extensive professional learning, and for ability as a sound and practical teacher, has retired from his chair in the Univeristy of Louisville, and has announced himself for practice in Cincinnati.

We hope that the leisure from the duties of his chair will enable him to complete the long promised and anxiously looked for work upon the practice of medicine in the West. A work much called for by the wants of the profession, and which the long experience and devotion to the subject of Prof. Drake, eminently qualify him to produce.

We regret to learn of the death of J. Harrison, M.D., late Editor of the ably conducted periodical, the New Orleans Med. and Surg. Jour., and Professor of Physiology and Pathology in the University of Louisiana. In him the medical profession has lost a talented writer, and an able and popular teacher.